# XR-4950X/4954X

# SERVICE MANUAL

*E Model*

**Ver 1.1 2001.05**

Photo: XR-4950X

| | |
|---|---|
| Model Name Using Similar Mechanism | XR-C5100 |
| Tape Transport Mechanism Type | MG-25F-136 |

## SPECIFICATIONS

### Cassette player section

| | |
|---|---|
| Tape track | 4-track 2-channel stereo |
| Wow and flutter | 0.08 % (WRMS) |
| Frequency response | 30 – 18,000 Hz |
| Signal-to-noise ratio | 58 dB |

### Tuner section

**FM**

| | |
|---|---|
| Tuning range | FM tuning interval:<br>50 kHz/200 kHz switchable<br>87.5 – 108.0 MHz<br>(at 50 kHz step)<br>87.5 – 107.9 MHz<br>(at 200 kHz step)<br>(XR-4950X)<br>87.5 – 108.0 MHz<br>(XR-4954X) |
| Aerial terminal | External aerial connector |
| Intermediate frequency | 10.7 MHz/450kHz |
| Usable sensitivity | 8 dBf |
| Selectivity | 75 dB at 400 kHz |
| Signal-to-noise ratio | 66 dB (stereo),<br>72 dB (mono) |
| Harmonic distortion at 1 kHz | 0.6 % (stereo),<br>0.3 % (mono) |
| Separation | 35 dB at 1 kHz |
| Frequency response | 30 – 15,000 Hz |

### Power amplifier section

| | |
|---|---|
| Outputs | Speaker outputs<br>(sure seal connectors) |
| Speaker impedance | 4 – 8 ohms |
| Maximum power output | 50 W × 4 (at 4 ohms) |

**MW**

| | |
|---|---|
| Tuning range | MW tuning interval:<br>9 kHz/10 kHz switchable<br>531 – 1,602 kHz<br>(at 9 kHz step)<br>530 – 1,710 kHz<br>(at 10 kHz step)<br>(XR-4950X)<br>531 – 1,602 kHz<br>(XR-4954X) |

**SW**

| | |
|---|---|
| Tuning range | SW tuning interval:<br>SW1: 2,940 – 7,735 kHz<br>SW2: 9,500 – 18,135 kHz<br>(except for 10,140 – 11,575 kHz) |
| Aerial terminal | External aerial connector |
| Intermediate frequency | 10.7 MHz/450 kHz |
| Sensitivity | 30 µV |

### General

| | |
|---|---|
| Outputs | Audio output<br>Power aerial relay control lead<br>Power amplifier control lead<br>Telephone ATT control lead |
| Tone controls | Bass ±9 dB at 100 Hz<br>Treble ±9 dB at 10 kHz |
| Power requirements | 12 V DC car battery (negative earth) |
| Dimensions | Approx. 178 × 50 × 183 mm (w/h/d) |
| Mounting dimensions | Approx. 182 × 53 × 162 mm (w/h/d) |
| Mass | Approx. 1.2 kg |
| Supplied accessories | Parts for installation and connections (1 set)<br>Front panel case (1) |

*Design and specifications are subject to change without notice.*

## FM/MW/SW CASSETTE CAR STEREO

**9-870-103-12**
2001E0500-1
© 2001.5

**Sony Corporation**
**e Vehicle Company**
**Shinagawa Tec Service Manual Production Group**

SONY®

## TABLE OF CONTENTS


**1. SERVICE NOTE** ..... 2

**2. GENERAL** ..... 3

**3. DISASSEMBLY** ..... 13

**4. ASSEMBLY OF MECHANISM DECK** ..... 14

**5. MECHANICAL ADJUSTMENTS** ..... 17

**6. ELECTRICAL ADJUSTMENTS**

6-1. Test Mode ..... 17
- Tape Deck Section ..... 17
- Tuner Section ..... 17

**7. DIAGRAMS**

7-1. Block Diagrams
- TUNER/TAPE/MAIN Section ..... 18
- DISPLAY/KEY CONTROL/BUS CONTROL/ POWER SUPPLY Section ..... 19

7-2. Printed Wiring Board – MAIN Board – ..... 21
7-3. Schematic Diagram – MAIN Board (1/2) – ..... 22
7-4. Schematic Diagram – MAIN Board (2/2) – ..... 23
7-5. Printed Wiring Boards – KEY/SUB Boards – ..... 24
7-6. Schematic Diagrams – KEY/SUB Boards – ..... 25
7-7. IC Block Diagrams ..... 26
7-8. IC Pin Function ..... 27

**8. EXPLODED VIEWS** ..... 32

**9. ELECTRICAL PARTS LIST** ..... 35


### Flexible Circuit Board Repairing

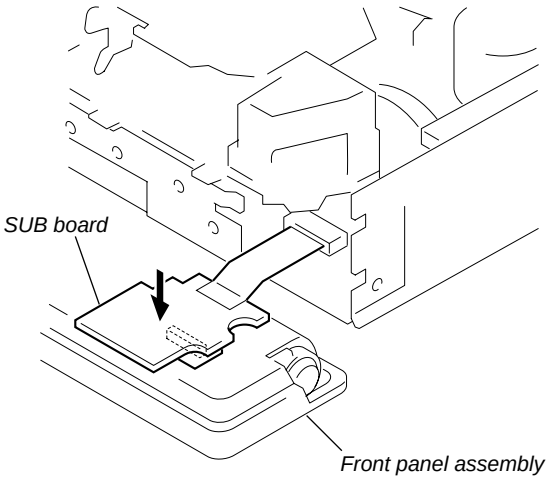
- Keep the temperature of the soldering iron around 270 ˚C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

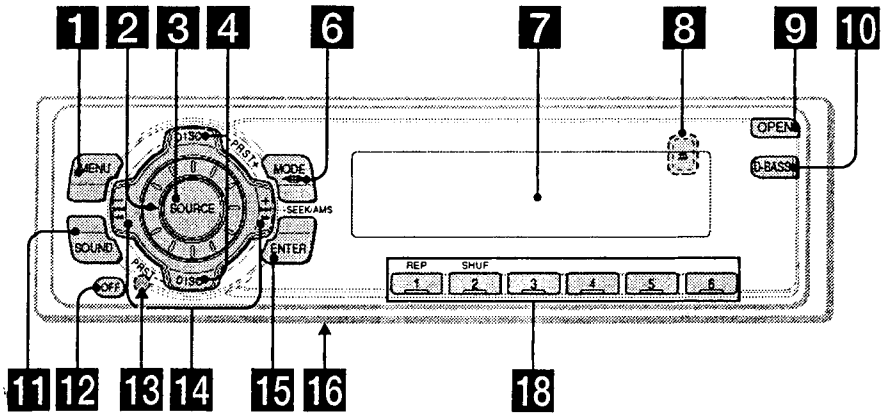
# SECTION 1
# SERVICE NOTE

Please press on the sub board from above when checking it.
This assures that the connector does not lose contact.



This section is extracted from instruction manual.

## Location of controls




Refer to the pages listed for details.

1 MENU button 9, 11, 12, 13, 16, 18

2 Volume control dial

3 SOURCE (TUNER/TAPE) button 8, 10, 12, 17

4 PRST +/– (cursor up/down) buttons 8, 9, 11, 12, 13, 16, 18
During radio reception:
Preset stations select 12

6 MODE button 10, 11, 12, 17
During tape playback:
Playback direction change 10
During radio reception:
BAND select 12

7 Display window

8 ⏏ (eject) button (located on the front side of the unit behind the front panel) 10

9 OPEN button 7, 10, 20

10 D-BASS button 17

11 SOUND button 16

12 OFF button* 7, 8, 10

13 Reset button (located on the front side of the unit behind the front panel) 7

14 SEEK/AMS –/+ (cursor left/right) buttons 8, 9, 10, 11, 12, 13, 16, 18
Seek 13
Automatic Music Sensor 10, 18
Manual search 13, 18

15 ENTER button 9, 11, 12, 13, 16, 18

16 XR-4950X:
Frequency select switch (located on the bottom of the unit)
See "Frequency select switch" in the Installation/Connections manual.

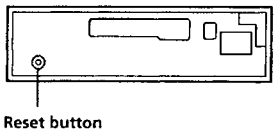
18 Number buttons
During radio reception:
Preset number select 12
During tape playback:
(1) REP 11

* **Warning when installing in a car without ACC (accessory) position on the ignition key switch**
**Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.**
When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

# Getting Started

## Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit.
Remove the front panel and press the reset button with a pointed object, such as a ballpoint pen.



Reset button

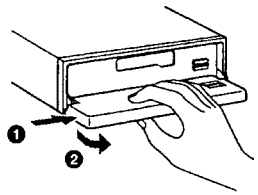
*Note*
*Pressing the reset button will erase the clock setting, preset memory and some memorised functions.*

## Detaching the front panel

You can detach the front panel of this unit to protect the unit from being stolen.

**1** **Press (OFF).**

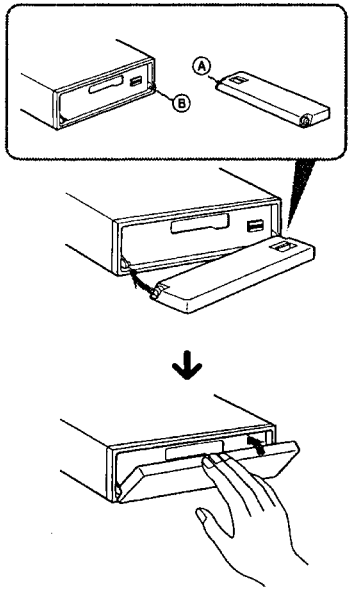
**2** **Press (OPEN), then slide the front panel to the right side, and pull out from the left side.**



*Notes*
- *Be sure not to drop the panel when detaching it from the unit.*
- *If you detach the panel while the unit is still turned on, the power will turn off automatically to prevent the speakers from being damaged.*
- *When you carry the front panel with you, use the supplied front panel case.*

### Attaching the front panel

Place the hole Ⓐ of the front panel onto the spindle Ⓑ on the unit as illustrated, then push the left side in.



*Notes*
- *Be careful not to attach the front panel upside down.*
- *Do not press the front panel too hard against the unit when attaching it.*
- *Do not press too hard or put excessive pressure on the display window of the front panel.*
- *Do not expose the front panel to direct sunlight or heat sources such as hot air ducts, and do not leave it in a humid place. Never leave it on the dashboard of a car parked in direct sunlight or where there may be a considerable rise in temperature.*

### Caution alarm

If you turn the car ignition off without removing the front panel, the caution alarm will beep for a few seconds.
If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

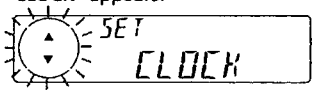


## Setting the clock

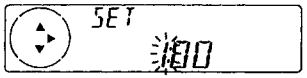
The clock uses a 12-hour digital indication.

Example: To set the clock to 10:08

**1** **Press (MENU), then press either side of (PRST/DISC) or (PRST) repeatedly until "CLOCK" appears.**



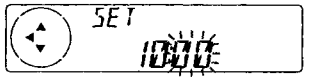

❶ **Press (ENTER).**




The hour indication flashes.

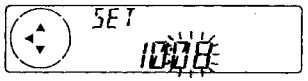
❷ **Press either side of (PRST/DISC) or (PRST) to set the hour.**

❸ **Press (+) side of (SEEK/AMS).**




The minute indication flashes.

❹ **Press either side of (PRST/DISC) or (PRST) to set the minute.**




**2** **Press (ENTER).**

The clock starts.

After the clock setting is complete, the display returns to normal playback mode.

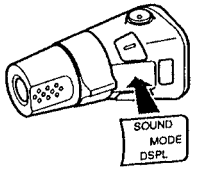
*Tip*
*When the D.INFO mode is set to ON, the time is always displayed (page 16).*

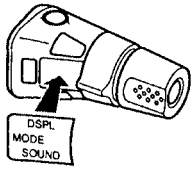
# Other Functions

You can also control this unit with the rotary commander.

## Labelling the rotary commander

Depending on how you mount the rotary commander, attach the appropriate label as shown in the illustration below.

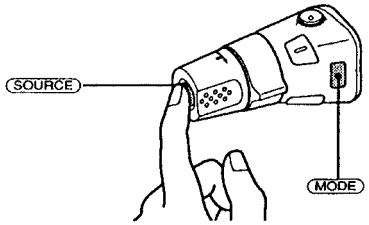



## Using the rotary commander

The rotary commander works by pressing buttons and/or rotating controls.

### By pressing buttons (the SOURCE and MODE buttons)



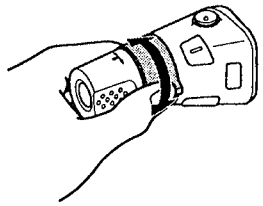

**Each time you press (SOURCE), the source changes as follows:**

**TUNER → TAPE**

**Pressing (MODE) changes the operation in the following ways;**

- **Tuner : FM1 → FM2 → FM3 → MW → SW1 → SW2**
- **Tape : playback direction**

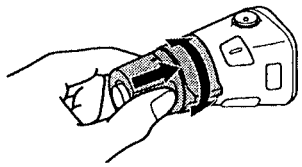
### By rotating the control (the SEEK/AMS control)



**Rotate the control and release it to:**

- Locate the beginnings of tracks on the tape. Rotate and hold the control, and release it to fast-wind the tape. To start playback while fast-winding the tape, press (MODE).
- Locate a specific track on a disc. Rotate and hold the control until you locate the specific point in a track, then release it to start playback.
- Tune in stations automatically. Rotate and hold the control to find a specific station.

### By pushing in and rotating the control (the PRESET/DISC control)

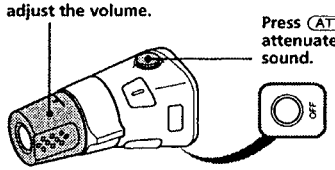


**Push in and rotate the control to:**

- Receive the stations memorised on the number buttons.
- Change the disc.

### Other operations

**Rotate the VOL control to adjust the volume.**

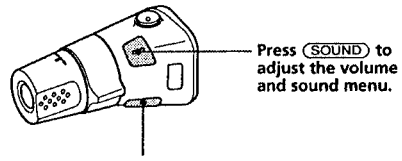



**Press (ATT) to attenuate the sound.**

**Press (OFF) to turn off the unit.**

***Note***

*When installing in a car without ACC (accessory) position on the ignition key switch, press (OFF) for two seconds to turn off the clock display after turning off the engine.*



**Press (SOUND) to adjust the volume and sound menu.**

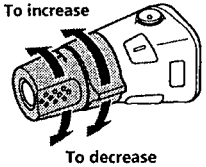
**Press (DSPL) to change the displayed items.**

***Tip***

*While the ATA function is activated, the display (TAPE ↔ TUNER) can be changed by pressing (DSPL).*

### Changing the operative direction

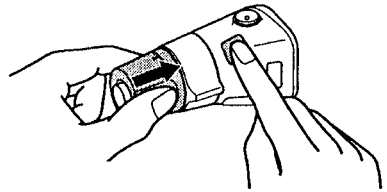
The operative direction of controls is factory-set as shown below.



**To increase**

**To decrease**

If you need to mount the rotary commander on the right hand side of the steering column, you can reverse the operative direction.



**Press (SOUND) for two seconds while pushing the VOL control.**

***Tip***

*You can also change the operative direction of these controls with the unit (see "Changing the sound and display settings" on page 16).*

# Installation (XR-4950X)

## Precautions

- If you mount other Sony equipment with this unit, it is better to mount this unit in the lower position.
- There must be a distance of at least 15 cm between the cassette slot of the unit and shift lever in order to insert a cassette easily. Choose the installation location carefully so the unit does not interfere with gear shifting and other driving operations.
- Choose the installation location carefully so that the unit will not interfere with normal driving.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

### Mounting angle adjustment

Adjust the mounting angle to less than 20°.

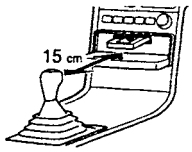
# Instalación

## Precauciones

- Si monta otro equipo Sony con esta unidad, es preferible montar esta unidad en la posición más baja.
- Para que sea posible insertar cassettes con facilidad, debe haber una distancia de al menos 15 cm entre la ranura de inserción de cassettes de la unidad y la palanca de cambios. Elija cuidadosamente el lugar de instalación de forma que la unidad no entorpezca las operaciones de cambio de marchas o de conducción en general.
- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire caliente de calefacción, o a polvo, suciedad, o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

### Ajuste del ángulo de montaje

Ajuste el ángulo de montaje a menos de 20°.




# 安裝

## 使用前注意事項

- 本機如果另外安裝有其他 Sony 牌設備時，最好把本機裝在較低位置。
- 在本機的卡帶槽口和變速桿之間，至少需保持 15 cm 距離以便於裝插卡帶。請留心選擇安裝位置以便使機器不至於妨礙您排檔和其他駕車操作。
- 本機請放在不妨礙司機駕駛之處。
- 避免將本機放在高溫之處，如陽光直接照射、暖氣機前、或灰塵極多、髒亂，以及極易受震動等地方。
- 為了安全起見，安裝時請使用附送的部件。

### 安裝角度之調整

請在 20 度以內調整安裝角度。

## How to detach and attach the front panel

**Before installing the unit, detach the front panel.**

### A To detach

Before detaching the front panel, be sure to press (OFF). Press (OPEN), then slide the front panel to the right side, and pull out the left side.

### B To attach

Place the hole Ⓐ in the front panel onto the spindle Ⓑ on the unit as illustrated, then push the left side in.

## Forma de extraer e instalar el panel frontal

**Antes de instalar la unidad, extraiga el panel frontal.**

### A Para extraerlo

Antes de extraer el panel frontal, cerciórese de presionar (OFF). Después presione (OPEN) a fin de abrirlo, después deslícelo hacia la derecha, y por último tire de su parte izquierda.

### B Para instalarlo

Coloque el orificio Ⓐ del panel frontal en el eje Ⓑ de la unidad, como se muestra en la ilustración, y después presione la parte izquierda.

## 如何拆卸和裝配前板

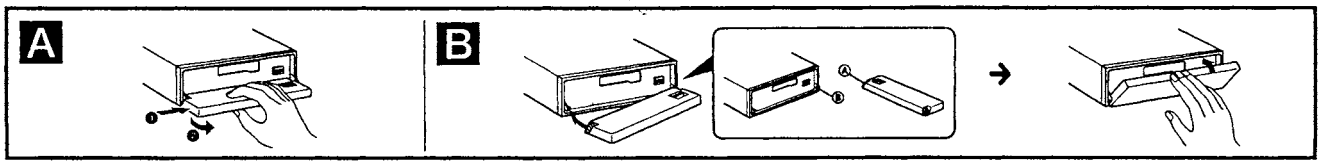
**安裝本機之前，請先拆卸前板。**

### A 拆卸

拆卸前面板之前，須先按下 (OFF) 鍵。按下 (OPEN) 鍵，然後將前面板向右邊滑動而拉出其左邊。

### B 裝配

如圖所示，將前板的 Ⓐ 孔對準本機的支軸 Ⓑ，然後將左側推入聽到咯噠聲。




## Mounting example

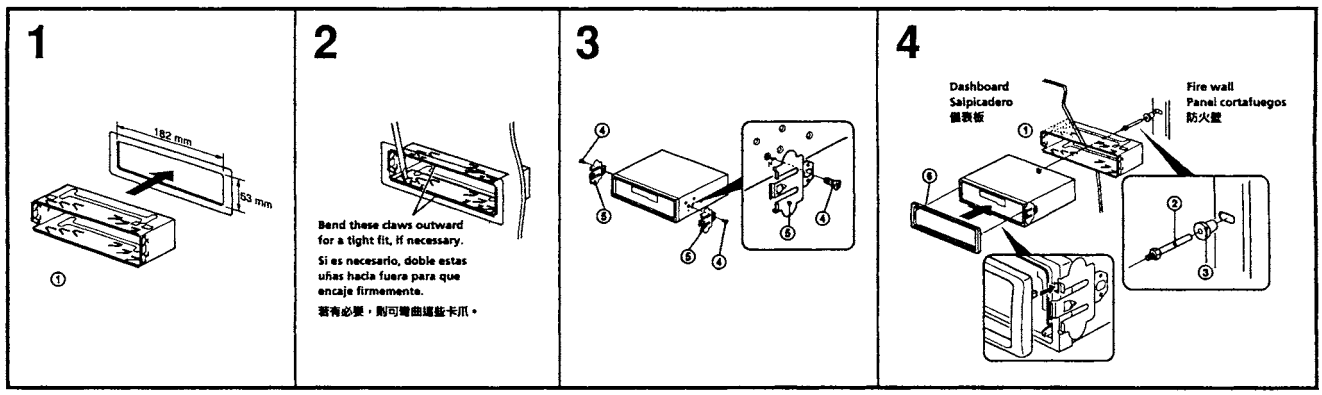
Installation in the dashboard

## Ejemplo de montaje

Instalación en el salpicadero

## 安裝示例

在儀表板中安裝




## Mounting the unit in a Japanese car

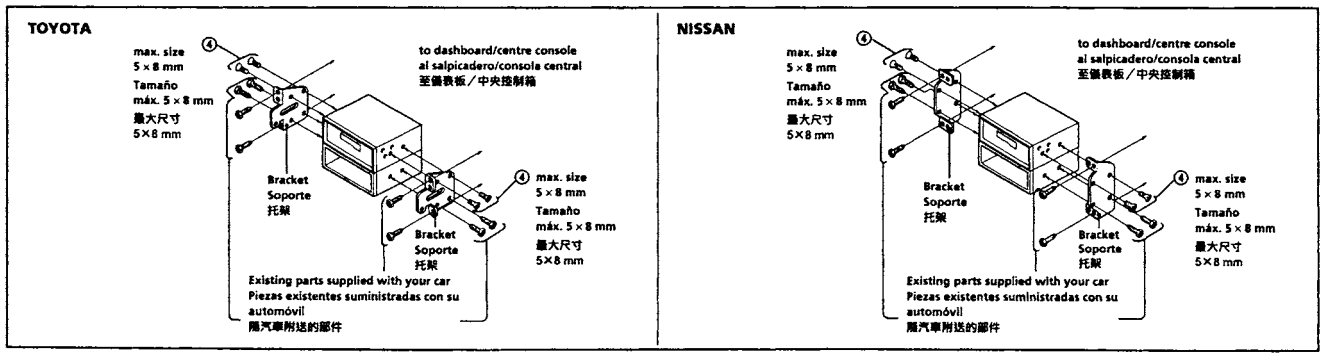
You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

## Montaje de la unidad en un automóvil japonés

Usted no podrá instalar esta unidad en algunos automóviles japoneses. En tal caso, consulte a su proveedor Sony.

## 將本機安裝於日本產汽車上時

有的日本產汽車不能安裝本機，在這種情形下，請您向當地的 Sony 經銷商諮詢。




*Note*
*To prevent malfunction, install only with the supplied screws ④.*

*Nota*
*Para evitar que se produzcan fallos, realice la instalación solamente con los tornillos suministrados ④.*

*註*
*為防止發生故障，安裝時只能使用附送的螺絲 ④。*

# Installation (XR-4954X)

## Precautions

- If you mount other Sony equipment with this unit, it is better to mount this unit in the lower position.
- There must be a distance of at least 15 cm between the cassette slot of the unit and shift lever in order to insert a cassette easily. Choose the installation location carefully so the unit does not interfere with gear shifting and other driving operations.
- Choose the installation location carefully so that the unit will not interfere with normal driving.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperatures, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

### Mounting angle adjustment

Adjust the mounting angle to less than 20°.

# 安裝

## 使用前注意事項

- 本機如果另外安裝有其他 Sony 牌裝備時，最好把本機裝在較低位置。
- 在本機的卡帶槽口和變速桿之間，至少需保持 15 cm 距離以使於裝插卡帶。請留心選擇安裝位置以使使機器不至於妨礙您排檔和其他駕車操作。
- 本機請放在不妨礙司機駕駛之處。
- 避免將本機放在高溫之處，如陽光直接照射、暖氣機前、或灰塵極多、髒亂，以及極易受震動等地方。
- 為了安全起見，安裝時請使用附送的部件。

### 安裝角度之調整

請在 20 度以內調整安裝角度。

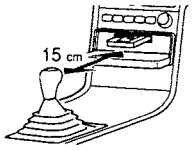
# التركيب

## تنبيهات إحتياطية

- اذا اردت تركيب جهاز سوني آخر مع هذا الجهاز، من الافضل تركيب هذا الجهاز في الموضع السفلي.
- يجب أن تكون هناك مسافة لا تقل عن ١٥ سم بين فتحة ادخال الكاسيت في الجهاز وذراع تغيير التروس وذلك لكي يتم ادخال الكاسيتات بسهولة. قم باختيار موضع التركيب بعناية بحيث لا يؤثر الجهاز على تغيير التروس وعمليات القيادة الاخرى.
- قم باختيار موقع التركيب بعناية بحيث لا تكون عائقاً أثناء قيادة السيارة.
- تجنب تركيب الوحدة في مناطق معرضة للغبار، للوسخ، الإهتزاز الشديد، أو لدرجة حرارة مرتفعة، مثل الاماكن المواجهة لأشعة الشمس المباشرة أو بالقرب من ماسورة المدفأة.
- إستعمل فقط مستلزمات التركيب المجهزة وذلك لضمان السلامة والتركيب الآمن.

### ضبط زاوية التركيب

اضبط زاوية التركيب أقل من ٢٠°.




## How to detach and attach the front panel

**Before installing the unit, detach the front panel.**

### A To detach

Before detaching the front panel, be sure to press (OFF). Press (OPEN), then slide the front panel to the right side, and pull out the left side.

### B To attach

Place the hole Ⓐ in the front panel onto the spindle Ⓑ on the unit as illustrated, then push the left side in.

## 如何拆卸和裝配前板

**安裝本機之前，請先拆卸前板。**

### A 拆卸

拆卸前面板之前，須先按下 (OFF) 鍵。按下 (OPEN) 鍵，然後將前面板向右邊滑動而拉出其左邊。

### B 裝配

如圖所示，將前板的Ⓐ孔對準本機的支軸Ⓑ，然後將左側推入壁到咯噠聲。

## كيفية نزع وتركيب اللوحة الامامية

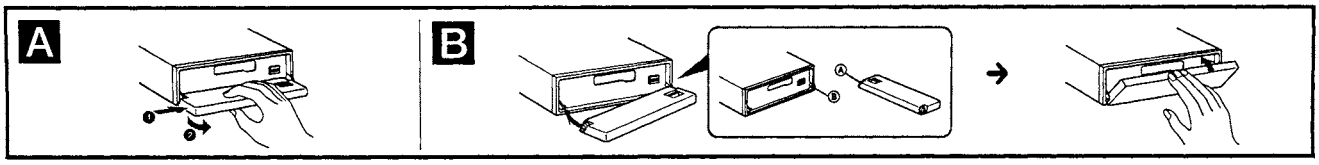
**قبل تركيب الوحدة، إنزع اللوحة الامامية.**

### A للنزع

قبل نزع اللوحة الامامية، تأكد من ضغط (OFF). إضغط (OPEN) ثم اسحب اللوحة الامامية الى الجهة اليمنى، واسحب الجانب الايسر نحو الخارج.

### B للتركيب

ضع الثقب Ⓐ الموجود في اللوحة الامامية على المحور Ⓑ في الجهاز كما هو موضح بالشكل، ثم ادفع الجانب الايسر نحو الداخل.




## Mounting example

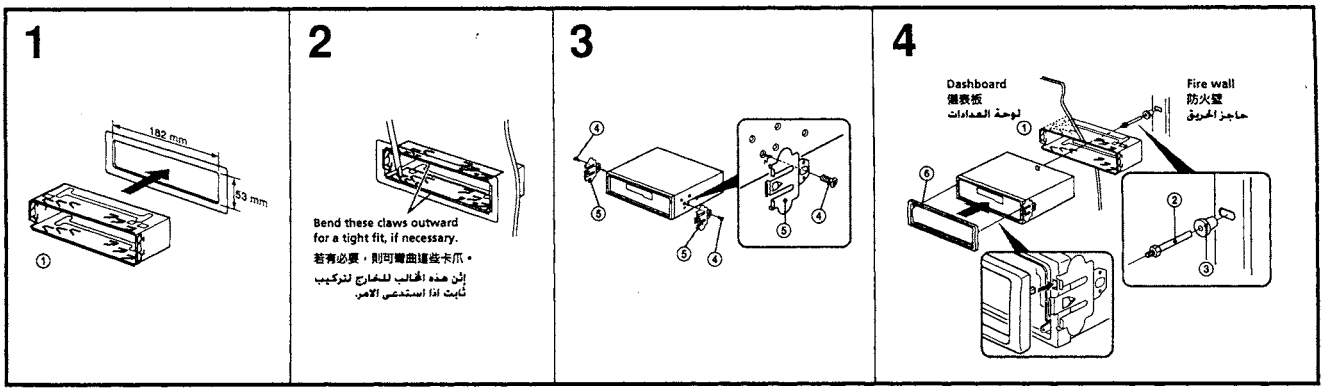
**Installation in the dashboard**

## 安裝示例

**在儀表板中安裝**

## مثال على التركيب

**التركيب على لوحة العدادات**




## Mounting the unit in a Japanese car

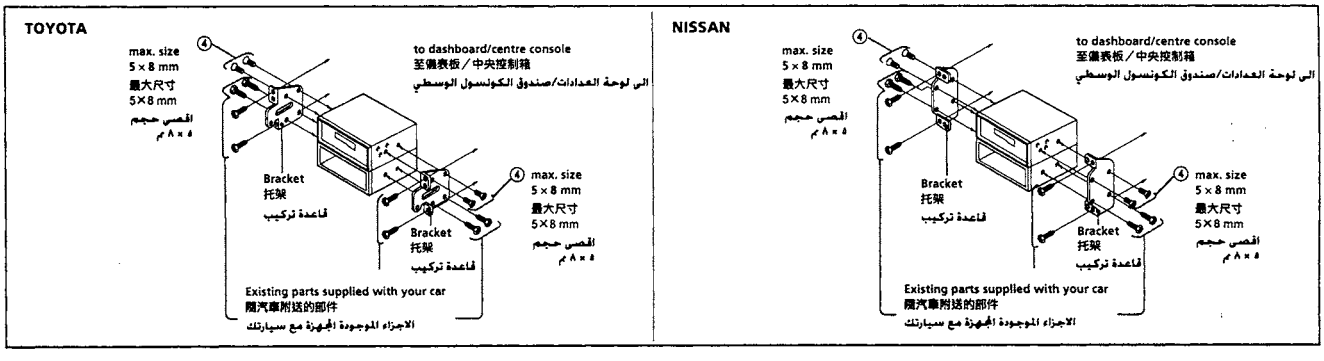
You may not be able to install this unit in some makes of Japanese cars. In such a case, consult your Sony dealer.

## 將本機安裝於日本產汽車上時

有的日本產汽車不能安裝本機，在這種情形下，請您向當地的 Sony 經銷商諮詢。

## تركيب الوحدة في سيارة يابانية

قد لا يمكن تركيب هذه الوحدة في بعض أنواع السيارات اليابانية. في مثل هذه الحالة، قم باستشارة أقرب موزع لمنتجات سوني لديك.




*Note*
*To prevent malfunction, install only with the supplied screws ④.*

*註*
*為防止發生故障，安裝時只能使用附送的螺絲 ④。*

*ملاحظة*
*لمنع العطل، قم بتركيب الوحدة باستعمال البراغي المجهزة فقط ④.*

# Connections (XR-4950X)

## Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Be careful not to pinch any wires between a screw and the body of the car or this unit or between any moving parts such as the seat railing, etc.
- Before making connections, disconnect the earth terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all earth wires to a common earth point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- When installing a car without ACC (accessory) position on the ignition key switch, connect the red power input lead to the +12V power terminal which is energized at all times with the yellow lead.

## Warning when installing in a car without ACC (accessory) position on the ignition key switch

**Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turned off the engine.**
When you press (OFF) momentarily, the clock display does not turn off and this causes battery wear.

## Frequency select switch

The MW (FM) tuning interval is factory-set to the 9K (50 K) position. If the frequency allocation system of your country is based on 10 kHz (200 kHz) interval, set the switch on the bottom of the unit to the 10 K (200 K) position before making connections.

## Reset button

When the installation and connections are complete, be sure to press the reset button with a ballpoint pen etc.

# Conexiones

## Precauciones

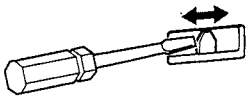
- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los rafles del asiento, etc.
- Antes de realizar las conexiones, desconecte el terminal de puesta a masa de la batería del automóvil a fin de evitar cortocircuitos.
- Conecte los cables de entrada de alimentación **amarillo** y **rojo** solamente después de haber conectado los demás.
- Cerciórese de conectar el cable de entrada de alimentación rojo a un terminal de 12 V positivo que se energice al poner la llave de encendido en la posición para accesorios.
- **Conecte todos los conductores de puesta a masa a un punto común.**
- Conecte el cable amarillo a un circuito libre del automóvil que tenga una capacidad superior a la del fusible de la unidad. Si conecta esta unidad en serie con otros componentes estereofónicos, el circuito del automóvil al que se encuentran conectados debe tener una capacidad superior a la de la suma de las capacidades de los fusibles de cada componente. Si ningún circuito del automóvil tiene una capacidad tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si el automóvil no dispone de ningún circuito para conectar esta unidad, conéctela a un circuito del automóvil con capacidad superior a la del fusible de la unidad, de forma que si se funde el fusible de ésta, no se interrumpa ningún otro circuito.
- Si realiza la instalación en un automóvil que no disponga de posición ACC (auxiliar) en el interruptor de la llave de encendido, conecte el cable rojo de entrada de alimentación al terminal de alimentación de +12V que recibe energía permanentemente; para ello, utilice el cable amarillo.

## Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (accesorio) en el interruptor de la llave de encendido

**Asegúrese de presionar (OFF) en la unidad durante dos segundos para desactivar la indicación del reloj una vez apagado el motor.**
Si presiona (OFF) momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

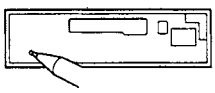
## Selector de frecuencia

El intervalo de sintonía de MW (FM) ha sido ajustado en fábrica a la posición 9 K (50 K). Si el sistema de asignación de frecuencias de su país se basa en el intervalo de 10 kHz (200 kHz), ponga este selector, situado en la base de la unidad, en la posición 10 K (200 K) antes de realizar las conexiones.



## Botón de restauración

Cuando finalice la instalación y las conexiones, cerciórese de pulsar el botón de restauración con un bolígrafo, etc.



# 線路連接

## 注意

- 本機只能使用負極接地 12 V 直流電源。
- 小心別使任何導線夾緊在螺栓和車身或本機間，也不夾緊在任何活動部件諸如座椅扶手間等。
- 連接前，先拔去汽車電池的接地端子，以免發生短路。
- **黃色**和**紅色**電源輸入導線必須在所有其它導線都連接完畢以後才連接。
- 紅色電源導線務請連接至 + 12 V 電源端子，該電源端子在汽車發動機點火鑰匙處於輔助位置時才通電。
- **將所有地線都連接到同一地點。**
- 將黃色導線連接到大於本機保險絲額定容量的未佔用的汽車電路上。若將本機和其它立體聲裝置相互串聯，所連接的汽車電路容量必須大於各組成機保險絲容量的總和。
  若沒有與本機保險絲額定容量一樣大的汽車電路可資利用，可將本機直接連接到電池上。若無適當的汽車電路可用於連接本機，請將本機連接到大於本機保險絲容量的汽車電路上。這樣，若本機的保險絲燒斷了，也不致於切斷其它電路。
- 當在發動機點火鑰匙開關沒具ACC（輔助）位置的汽車里按裝時，請連接紅色電源輸入導線至鼓時通電的帶黃色導線的+12V電源端子。

## 當在點火鑰匙開關沒具輔助位置的汽車里按裝時的警告

**請確認在關閉發動機後按壓 (OFF) 鍵兩秒鐘以關閉時鐘顯示。**
當您短暫按壓 (OFF) 鍵，時鐘顯示將不能關閉並且將引起電池消耗。

## 頻率選擇開關

MW (FM) 調諧間隔在出廠前被設定在 9 K (50 K) 位置上。若貴國的頻率分配系統是以 10 KHz (200 KHz) 間隔為基礎的，連接前，請將本機底部上的開關設定在 10 K (200 K) 位置上。

## 復位鍵

當安裝和連接完成後，務請用圓珠筆等按壓復位鍵。

# Connections (XR-4954X)

## Cautions

- This unit is designed for negative earth 12 V DC operation only.
- Be careful not to pinch any wires between a screw and the body of the car or this unit or between any moving parts such as the seat railing, etc.
- Before making connections, disconnect the earth terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all earth wires to a common earth point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- When installing a car without ACC (accessory) position on the ignition key switch, connect the red power input lead to the +12V power terminal which is energized at all times with the yellow lead.

## Warning when installing in a car without ACC (accessory) position on the ignition key switch

**Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turned off the engine.**
When you press (OFF) momentarily, the clock display does not turn off and this causes battery wear.

## Reset button

When the installation and connections are complete, be sure to press the reset button with a ballpoint pen etc.

# 線路連接

## 注意

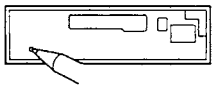
- 本機只能使用負極接地 12 V 直流電源。
- 小心別使任何導線夾緊在螺栓和車身或本機間，也不夾緊在任何活動部件諸如座椅扶手間等。
- 連接前，先拔去汽車電池的接地端子，以免發生短路。
- **黃色**和**紅色**電源輸入導線必須在所有其它導線都連接完畢以後才連接。
- 紅色電源導線務請連接至 + 12 V 電源端子，該電源端子在汽車發動機點火鑰匙處於輔助位置時才通電。
- **將所有地線都連接到同一地點。**
- 將黃色導線連接到大於本機保險絲額定容量的未佔用的汽車電路上。若將本機和其它立體聲裝置相互串聯，所連接的汽車電路容量必須大於各組成機保險絲容量的總和。
  若沒有與本機保險絲額定容量一樣大的汽車電路可資利用，可將本機直接連接到電池上。若無適當的汽車電路可用於連接本機，請將本機連接到大於本機保險絲容量的汽車電路上。這樣，若本機的保險絲燒斷了，也不致於切斷其它電路。
- 當在發動機點火鑰匙開關沒具ACC（輔助）位置的汽車里安裝時，請連接紅色電源輸入導線至啟時通電的帶黃色導線的+12V電源端子。

## 當在點火鑰匙開關沒具輔助位置的汽車里按裝時的警告

**請確認在關閉發動機後按壓 (OFF) 鍵兩秒鐘以關閉時鐘顯示。**
當您短暫按壓 (OFF) 鍵，時鐘顯示將不能關閉並且將引起電池消耗。

## 復位鍵

當安裝和連接完成後，務請用圓珠筆等按壓復位鍵。



# التوصيلات

## تنبيهات

- هذه الوحدة مصممة للتشغيل على تيار مباشر ١٢ فولت بتأريض سالب فقط.
- إحرص على أن لا تقبض أي أسلاك بين البرغي والجسم بالسيارة أو بالجهاز هذا أو بين أي قطع متحركة مثل تسييج الكرسي الخ.
- قبل عمل التوصيلات، إفصل طرف توصيل الارضي الخاصة ببطارية السيارة لتفادي حدوث تماس كهربي.
- لا تقم بتوصيل اسلاك دخل التيار **الاصفر والاحمر** إلا بعد الانتهاء من توصيل جميع الاسلاك الاخرى.
- تأكد من توصيل سلك دخل التيار الاحمر بطرف التيار ١٢ فولت الموجب الذي يسري فيه التيار عندما يكون مفتاح تشغيل المحرك في الوضع الثانوي (وضع الكماليات).
- **قم بتمديد جميع اسلاك التأريض الى نقطة تأريض مشتركة.**
- قم بتوصيل السلك الاصفر بدائرة كهربائية غير مستعملة في السيارة بمعايرة تزيد عن معايرة فيوز الوحدة. اذا قمت بتوصيل الوحدة على التوالي مع اجهزة ستيريو اخرى، فيجب أن تكون الدائرة الكهربائية التي يتم توصيلها بها بمعايرة اعلى من مجموع معايرات فيوزات الاجهزة الموصلة. اذا لم توجد دائرة كهربائية في السيارة بمعايرة تساوي معايرة فيوز الوحدة، قم بتوصيل الوحدة بالبطارية مباشرة. اذا لم توجد دائرة كهربائية لتوصيل الوحدة، قم بتوصيل الوحدة بدائرة كهربائية في السيارة بمعايرة اعلى من معايرة فيوز الوحدة بطريقة تحول دون قطع اي دوائر اخرى في حالة احتراق فيوز الوحدة.
- عند التركيب في سيارة لا تتضمن موضع للكماليات ACC في محول تشغيل المحرك، قم بتوصيل سلك دخل التيار الاحمر بطرف توصيل التيار +١٢ فولت الذي يسري فيه التيار بشكل دائم مع السلك الاصفر.

## تحذير عند التركيب في السيارة لا تتضمن الوضع الثانوي ACC على مفتاح الاشعال

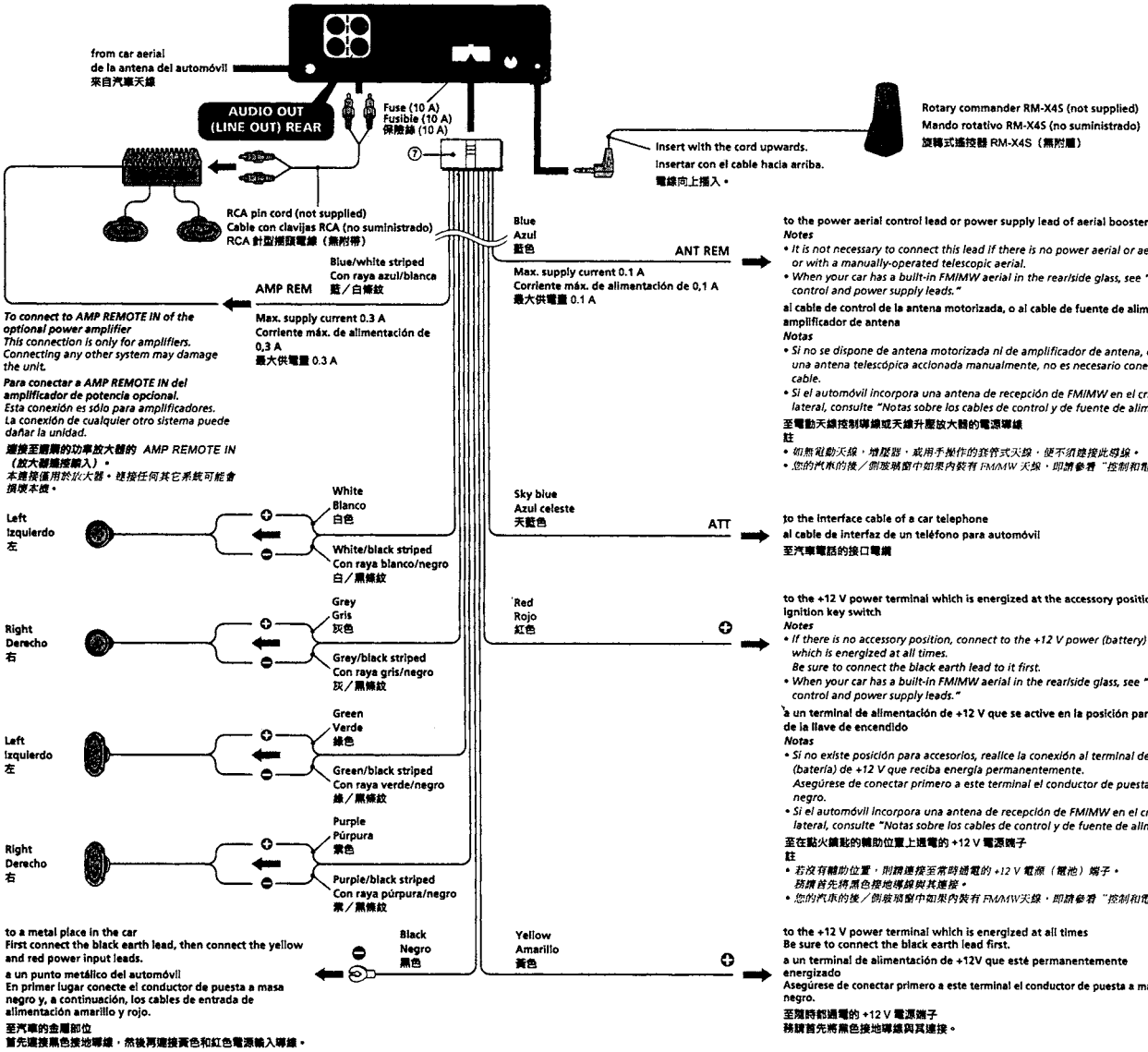
**تأكد من ضغط زر الايقاف (OFF) على الوحدة لمدة ثانيتين لايقاف العارضة بعد ايقاف أحرك.**
عند ضغط زر الايقاف (OFF) لحظيا، لا يتم ايقاف عرض الساعة وتسبب استهلاك البطارية.

## زر اعادة التهيئة

عند الانتهاء من التركيب والتوصيلات، تأكد من ضغط زر اعادة التهيئة باستعمال قلم جاف الخ.
زر اعادة التهيئة موجود على يسار الموصل الموجود على جانب الوحدة عند نزع اللوحة الامامية.

(XR-4950X)

## Connection example
## Ejemplo de conexiones
## 線路連接圖例


from car aerial
de la antena del automóvil
來自汽車天線
AUDIO OUT
(LINE OUT) REAR
Fuse (10 A)
Fusible (10 A)
保險絲 (10 A)
Rotary commander RM-X4S (not supplied)
Mando rotativo RM-X4S (no suministrado)
旋轉式遙控器 RM-X4S（無附屬）
Insert with the cord upwards.
Insertar con el cable hacia arriba.
電線向上插入。
RCA pin cord (not supplied)
Cable con clavijas RCA (no suministrado)
RCA 針型插頭電線（無附帶）
Blue
Azul
藍色
ANT REM
Max. supply current 0.1 A
Corriente máx. de alimentación de 0,1 A
最大供電量 0.1 A
to the power aerial control lead or power supply lead of aerial booster amplifier
Notes
• It is not necessary to connect this lead if there is no power aerial or aerial booster, or with a manually-operated telescopic aerial.
• When your car has a built-in FM/MW aerial in the rear/side glass, see "Notes on the control and power supply leads."
al cable de control de la antena motorizada, o al cable de fuente de alimentación del amplificador de antena
Notas
• Si no se dispone de antena motorizada ni de amplificador de antena, o se utiliza una antena telescópica accionada manualmente, no es necesario conectar este cable.
• Si el automóvil incorpora una antena de recepción de FM/MW en el cristal trasero lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".
至電動天線控制導線或天線升壓放大器的電源導線
註
• 如無電動天線，增壓器，或用手操作的套管式天線，便不須連接此導線。
• 您的汽車的後／側玻璃窗中如果內裝有 FM/MW 天線，即請參看 "控制和電源線須知"。
Blue/white striped
Con raya azul/blanca
藍／白條紋
AMP REM
Max. supply current 0.3 A
Corriente máx. de alimentación de 0,3 A
最大供電量 0.3 A
To connect to AMP REMOTE IN of the optional power amplifier
This connection is only for amplifiers. Connecting any other system may damage the unit.
Para conectar a AMP REMOTE IN del amplificador de potencia opcional.
Esta conexión es sólo para amplificadores. La conexión de cualquier otro sistema puede dañar la unidad.
連接至選購的功率放大器的 AMP REMOTE IN（放大器遙控輸入）。
本連接僅用於放大器。連接任何其它系統可能會損壞本機。
Sky blue
Azul celeste
天藍色
ATT
to the interface cable of a car telephone
al cable de interfaz de un teléfono para automóvil
至汽車電話的接口電纜
Red
Rojo
紅色
to the +12 V power terminal which is energized at the accessory position of the ignition key switch
Notes
• If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.
Be sure to connect the black earth lead to it first.
• When your car has a built-in FM/MW aerial in the rear/side glass, see "Notes on the control and power supply leads."
a un terminal de alimentación de +12 V que se active en la posición para accesorios de la llave de encendido
Notas
• Si no existe posición para accesorios, realice la conexión al terminal de alimentación (batería) de +12 V que reciba energía permanentemente.
Asegúrese de conectar primero a este terminal el conductor de puesta a masa negro.
• Si el automóvil incorpora una antena de recepción de FM/MW en el cristal trasero/ lateral, consulte "Notas sobre los cables de control y de fuente de alimentación".
至在點火鑰匙的輔助位置上通電的 +12 V 電源端子
註
• 若沒有輔助位置，則請連接至常時通電的 +12 V 電源（電池）端子。
務請首先將黑色接地導線與其連接。
• 您的汽車的後／側玻璃窗中如果內裝有 FM/MW天線，即請參看 "控制和電源線須知"。
Yellow
Amarillo
黃色
to the +12 V power terminal which is energized at all times
Be sure to connect the black earth lead first.
a un terminal de alimentación de +12V que esté permanentemente energizado
Asegúrese de conectar primero a este terminal el conductor de puesta a masa negro.
至隨時都通電的 +12 V 電源端子
務請首先將黑色接地導線與其連接。
Black
Negro
黑色
to a metal place in the car
First connect the black earth lead, then connect the yellow and red power input leads.
a un punto metálico del automóvil
En primer lugar conecte el conductor de puesta a masa negro y, a continuación, los cables de entrada de alimentación amarillo y rojo.
至汽車的金屬部位
首先連接黑色接地導線，然後再連接黃色和紅色電源輸入導線。
Left
Izquierdo
左
Right
Derecho
右
White
Blanco
白色
White/black striped
Con raya blanco/negro
白／黑條紋
Grey
Gris
灰色
Grey/black striped
Con raya gris/negro
灰／黑條紋
Green
Verde
綠色
Green/black striped
Con raya verde/negro
綠／黑條紋
Purple
Púrpura
紫色
Purple/black striped
Con raya púrpura/negro
紫／黑條紋

### Notes on the control leads
- The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation) function.
- A power aerial without a relay box cannot be used with this unit.
- When your car has a built-in FM/MW aerial in the rear/side glass, it is necessary to connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.

### Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

### Notes on speaker connection
- Before connecting the speakers, turn the unit off.
- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
- Do not attempt to connect the speakers in parallel.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Be sure to connect passive speakers to these terminals.

### Notas sobre conductores de control
- El conductor de control (azul) de la antena motorizada suministra + 12 V CC al activar el sintonizador o la función ATA (activación automática del sintonizador).
- Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.
- Si se ha instalado una antena de recepción de FM/MW en el cristal trasero lateral del automóvil, es necesario conectar el cable de control de la antena motorizada (azul) o el cable auxiliar de entrada de alimentación (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener información detallada, consulte a su proveedor.

### Conexión para protección de la memoria
Si conecta el cable de entrada de alimentación amarillo, el circuito de la memoria siempre recibirá alimentación, aunque ponga la llave de encendido en la posición de apagado.

### Notas sobre la conexión de los altavoces
- Antes de conectar los altavoces, desconecte la alimentación de la unidad.
- Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia admisible adecuada, ya que de lo contrario podría dañarlos.
- No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz derecho a los del izquierdo.
- No intente conectar los altavoces en paralelo.
- No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.

### 關於控制導線的注意事項
- 打開調諧器或激活 ATA（自動調諧器激活）功能時，電動天線控制導線（藍色）將提供 +12 V 直流電。
- 本機不能使用不具備繼電箱的電動天線。
- 您的汽車的後／側玻璃窗中如果內裝有 FM/MW 天線，即請把電動天線控制導線（藍色）或輔助的電源輸入導線（紅色）連接到現有的天線增壓器的電源端子上。詳細內容，請洽詢交易店。

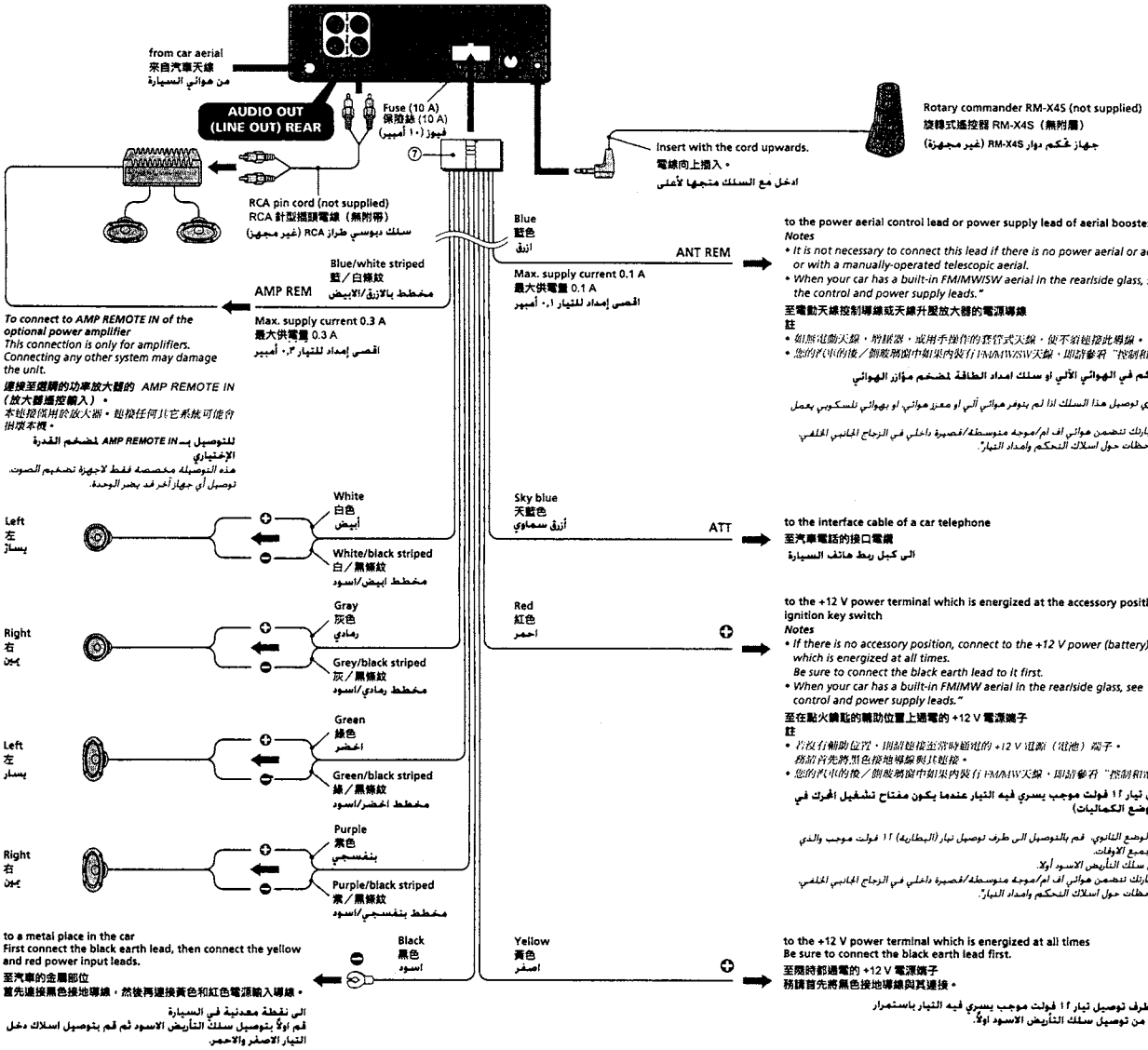
### 保持記憶功能的連接法
當連接好黃色電源輸入導線時，即使汽車發動機點火鑰匙被轉至電源切斷之處，電流仍繼續將電流供給記憶功能用電路，以保持所記憶著的數據。

### 連接擴聲器時的注意事項
- 連接揚聲器電線之前，請先切斷本機電源。
- 請使用 4 至 8 Ω 阻抗並具有足夠功率的揚聲器。否則會損壞揚聲器。
- 不可將揚聲器的端子連接至汽車底盤，也不可將左擴聲器和右擴聲器相連接。
- 擴聲器不可平行連接。
- 不可連接有源揚聲器（內裝有放大器者）至本機的揚聲器端子。否則會損壞有源揚聲器。因此，這些端子只能連接無源揚聲器。

(XR-4954X)

## Connection example
## 線路連接圖例

## مثال على التوصيل


from car aerial
來自汽車天線
من هوائي السيارة
AUDIO OUT
(LINE OUT) REAR
Fuse (10 A)
保險絲 (10 A)
فيوز (١٠ أمبير)
Insert with the cord upwards.
電線向上插入。
ادخل مع السلك متجها لأعلى
Rotary commander RM-X4S (not supplied)
旋轉式遙控器 RM-X4S（無附屬）
جهاز تحكم دوار RM-X4S (غير مجهزة)
RCA pin cord (not supplied)
RCA 針型插頭電線（無附帶）
سلك دبوسي طراز RCA (غير مجهز)
Blue
藍色
ازرق
ANT REM
Max. supply current 0.1 A
最大供電量 0.1 A
أقصى إمداد للتيار ٠,١ أمبير
to the power aerial control lead or power supply lead of aerial booster amplifier
Notes
• It is not necessary to connect this lead if there is no power aerial or aerial booster, or with a manually-operated telescopic aerial.
• When your car has a built-in FM/MW/SW aerial in the rearside glass, see "Notes on the control and power supply leads."
至電動天線控制導線或天線升壓放大器的電源導線
註
• 如無電動天線，增壓器，或用手操作的套管式天線，使不須連接此導線。
• 您的汽車的後／側玻璃窗中如果內裝有 FM/MW/SW天線，即請參看 "控制和電源線須知"。
الى سلك التحكم في الهوائي الآلي او سلك امداد الطاقة لمضخم مؤازر الهوائي
ملاحظة
• ليس من الضروري توصيل هذا السلك اذا لم يتوفر هوائي آلي او معزز هوائي او بهوائي تلسكوبي يعمل يدويا.
• عندما تكون سيارتك تتضمن هوائي اف ام/موجه متوسطة/قصيرة داخلي في الزجاج الخلفي راجع قسم "ملاحظات حول اسلاك التحكم وامداد التيار".
Blue/white striped
藍／白條紋
مخطط بالازرق/الابيض
AMP REM
Max. supply current 0.3 A
最大供電量 0.3 A
أقصى إمداد للتيار ٠,٣ أمبير
To connect to AMP REMOTE IN of the optional power amplifier
This connection is only for amplifiers. Connecting any other system may damage the unit.
連接至選購的功率放大器的 AMP REMOTE IN（放大器遙控輸入）。
本連接僅用於放大器。連接任何其它系統可能會損壞本機。
للتوصيل بـ AMP REMOTE IN لمضخم القدرة الإختياري
هذه التوصيلة مخصصة فقط لاجهزة تضخيم الصوت. توصيل أي جهاز آخر قد يضر الوحدة.
Sky blue
天藍色
أزرق سماوي
ATT
to the interface cable of a car telephone
至汽車電話的接口電纜
الى كبل ربط هاتف السيارة
White
白色
أبيض
Left
左
يسار
White/black striped
白／黑條紋
مخطط ابيض/اسود
Red
紅色
احمر
to the +12 V power terminal which is energized at the accessory position of the ignition key switch
Notes
• If there is no accessory position, connect to the +12 V power (battery) terminal which is energized at all times.
Be sure to connect the black earth lead to it first.
• When your car has a built-in FM/MW aerial in the rearside glass, see "Notes on the control and power supply leads."
至在點火鑰匙的輔助位置上通電的 +12 V 電源端子
註
• 若沒有輔助位置，則請連接至常時通電的 +12 V 電源（電池）端子。
務請首先將黑色接地導線與其連接。
• 您的汽車的後／側玻璃窗中如果內裝有 FM/MW天線，即請參看 "控制和電源線須知"。
الى طرف توصيل تيار ١٢ فولت موجب يسري فيه التيار عندما يكون مفتاح تشغيل المحرك في الوضع الثانوي (وضع الكماليات)
ملاحظات
• عند عدم وجود الوضع الثانوي قم بالتوصيل الى طرف توصيل تيار (البطارية) ١٢ فولت موجب والذي يولد طاقة في جميع الاوقات.
تأكد من توصيل سلك التأريض الاسود أولا.
• عندما تكون سيارتك تتضمن هوائي اف ام/موجه متوسطة/قصيرة داخلي في الزجاج الخلفي راجع قسم "ملاحظات حول اسلاك التحكم وامداد التيار".
Gray
灰色
رمادي
Right
右
يمين
Grey/black striped
灰／黑條紋
مخطط رمادي/اسود
Green
綠色
اخضر
Left
左
يسار
Green/black striped
綠／黑條紋
مخطط اخضر/اسود
Purple
紫色
بنفسجي
Right
右
يمين
Purple/black striped
紫／黑條紋
مخطط بنفسجي/اسود
Red
紅色
احمر
to the +12 V power terminal which is energized at all times
Be sure to connect the black earth lead first.
至隨時都通電的 +12 V 電源端子
務請首先將黑色接地導線與其連接。
الى طرف توصيل تيار ١٢ فولت موجب يسري فيه التيار باستمرار
تأكد من توصيل سلك التأريض الاسود اولا.
to a metal place in the car
First connect the black earth lead, then connect the yellow and red power input leads.
至汽車的金屬部位
首先連接黑色接地導線，然後再連接黃色和紅色電源輸入導線。
الى نقطة معدنية في السيارة
قم اولاً بتوصيل سلك التأريض الاسود ثم قم بتوصيل اسلاك دخل التيار الاصفر والاحمر.
Black
黑色
اسود
Yellow
黃色
اصفر

### Notes on the control leads
- The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the ATA (Automatic Tuner Activation) function.
- A power aerial without a relay box cannot be used with this unit.
- When your car has a built-in FM/MW/SW aerial in the rearside glass, it is necessary to connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.

### Memory hold connection
When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition key is turned off.

### Notes on speaker connection
- Before connecting the speakers, turn the unit off.
- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
- Do not attempt to connect the speakers in parallel.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Be sure to connect passive speakers to these terminals.

### 關於控制導線的注意事項
- 打開調諧器或激活 ATA（自動調諧器啟活）功能時，電動天線控制導線（藍色）將提供 +12 V 直流電。
- 本機不能使用不具繼電箱的電動天線。
- 您的汽車的後／側玻璃窗中如果內裝有 FM/MW/SW 天線，即請把電動天線控制導線（藍色）或輔助的電源輸入導線（紅色）連接到現有的天線增壓器的電源端子上。詳細內容，請洽詢交易店。

### 保持記憶功能的連接法
當連接黃色電源輸入導線時，即便汽車發動機點火鑰匙在電源切斷之處，電源仍繼續將電流供給記憶功能用電路，以保持所記憶者的數據。

### 連接揚聲器時的注意事項
- 連接揚聲器電線之前，請先切斷本機電源。
- 請使用 4 至 8 Ω 阻抗並具有足夠功率的揚聲器。否則會損壞揚聲器。
- 不可將揚聲器的端子連接至汽車底盤，也不可將左揚聲器和右揚聲器相連接。
- 揚聲器不可平行連接。
- 不可連接有源揚聲器（內裝有放大器者）至本機的揚聲器端子。否則會損壞有源揚聲器。因此，這些端子只能連接無源揚聲器。

### ملاحظات حول اسلاك التحكم
- سلك التحكم في الهوائي الآلي (الازرق) يقوم بامداد تيار مباشر ١٢+ فولت عندما تقوم بتشغيل الراديو او وظيفة التشغيل التلقائي لموالف البث ATA.
- لا يمكن استعمال هوائي آلي بدون صندوق ترحيل مع هذه الوحدة.
- عندما تكون سيارتك تتضمن هوائي اف ام/موجه متوسطة/قصيرة داخلي في الزجاج الخلفي من الضروري توصيل سلك التحكم بالهوائي الآلي (ازرق) او سلك دخل القدرة الثانوي (احمر) الى طرف توصيل القدرة لمعزز الهوائي الموجود اصلا. لمزيد من التفاصيل، قم باستشارة الوكيل لديك.

### توصيلة حفظ الذاكرة
عند توصيل سلك دخل التيار الاصفر، يتم إمداد التيار بصورة مستمرة الى دائرة الذاكرة حتى اثناء إيقاف مفتاح تشغيل المحرك.

### ملاحظات حول توصيل السماعات
- قبل توصيل السماعات، اوقف تشغيل الوحدة.
- إستعمل سماعات بمعاوقة من ٤ الى ٨ أوم وبسعة تحمّل قدرة مناسبة. اذا لم تفعل ذلك فقد تتلف السماعات.
- لا تقم بتوصيل أطراف توصيل نظام السماعات بهيكل السيارة. ولا تقم بتوصيل أطراف توصيل السماعة اليمنى بأطراف توصيل السماعة اليسرى.
- لا تحاول توصيل السماعات على التوازي.
- لا تعمد الى توصيل اي سماعات نشطة (مجهزة بمضخمات داخلية) باطراف توصيل السماعات في الوحدة. يمكن لذلك العمل ان يتلف السماعات النشطة. لذا تأكد من توصيل سماعات غير نشطة بتلك الاطراف.

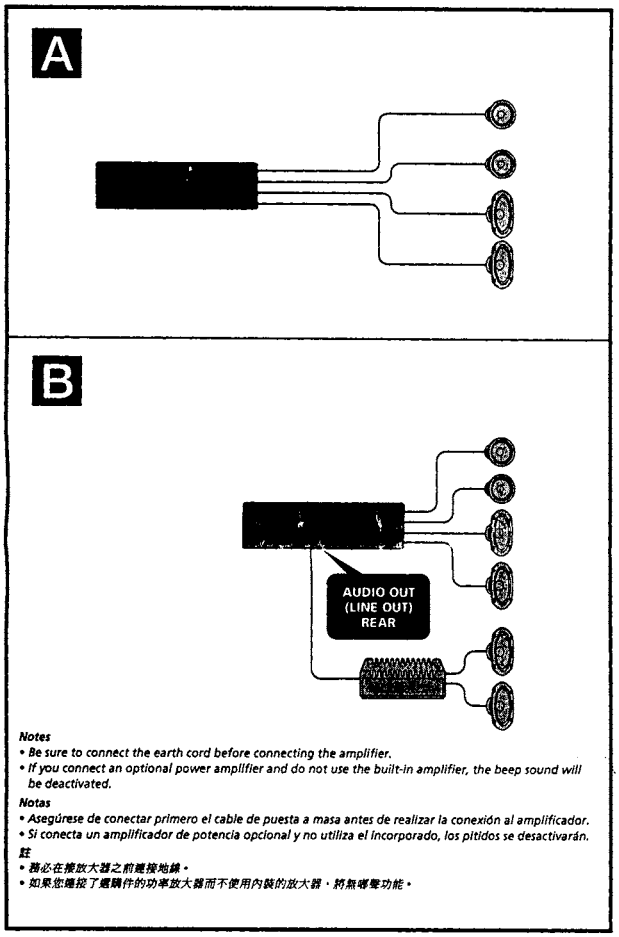
(XR-4950X)

## Connection diagram
## Diagramas de conexión
## 線路連接圖

**Equipment used in illustrations (not supplied)**
**Equipo utilizado en las ilustraciones (no suministrado)**
**插圖中的裝置（無附帶）**

- Front speaker / Altavoz delantero / 前揚聲器
- Power amplifier / Amplificador de potencia / 功率放大器
- Rear speaker / Altavoz trasero / 後揚聲器
- CD/MD changer / Cambiador de CD/MD / CD/MD 換碟機

*For connecting two or more changers, the source selector XA-C30 (optional) is necessary.*
*Cuando desee conectar dos o más cambiadores, necesitará un selector de fuente XA-C30 (opcional).*
*若要連接 2 部或 2 部以上換碟機時，必須使用音源選擇器 XA-C30（選購件）。*




***Notes***
- *Be sure to connect the earth cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

***Notas***
- *Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.*
- *Si conecta un amplificador de potencia opcional y no utiliza el incorporado, los pitidos se desactivarán.*

***註***
- *務必在接放大器之前連接地線。*
- *如果您連接了選購件的功率放大器而不使用內裝的放大器，將無嗶聲功能。*

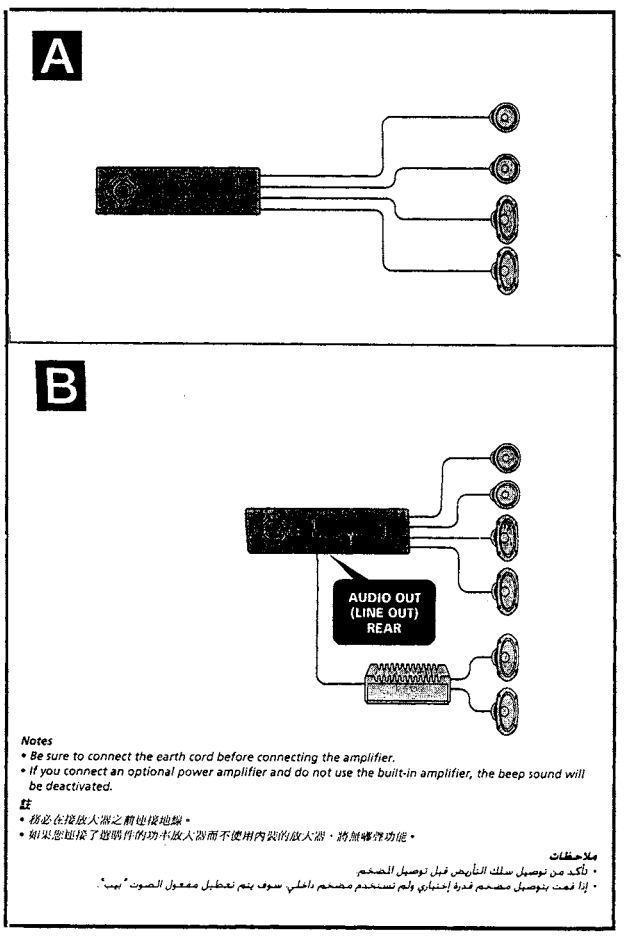
(XR-4954X)

## Connection diagram
## 線路連接圖
## مخطط التوصيل

**Equipment used in illustrations (not supplied)**
**插圖中的裝置（無附帶）**
**تجهيزات مستخدمة بالأشكال البيانية (غير مرفقة)**

- Front speaker / 前揚聲器 / السماعات الامامية
- Power amplifier / 功率放大器 / مضخم القدرة
- Rear speaker / 後揚聲器 / السماعات الخلفية
- CD/MD changer / CD/MD 換碟機 / مغير الاسطوانة سي دي/ الاسطوانة إم دي

*For connecting two or more changers, the source selector XA-C30 (optional) is necessary.*
*若要連接 2 部或 2 部以上換碟機時，必須使用音源選擇器 XA-C30（選購件）。*
*لتوصيل جهازي تغيير اسطوانات او اكثر من الضروري استعمال وحدة اختيار المصدر XA-C30 (اختيارية).*




***Notes***
- *Be sure to connect the earth cord before connecting the amplifier.*
- *If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.*

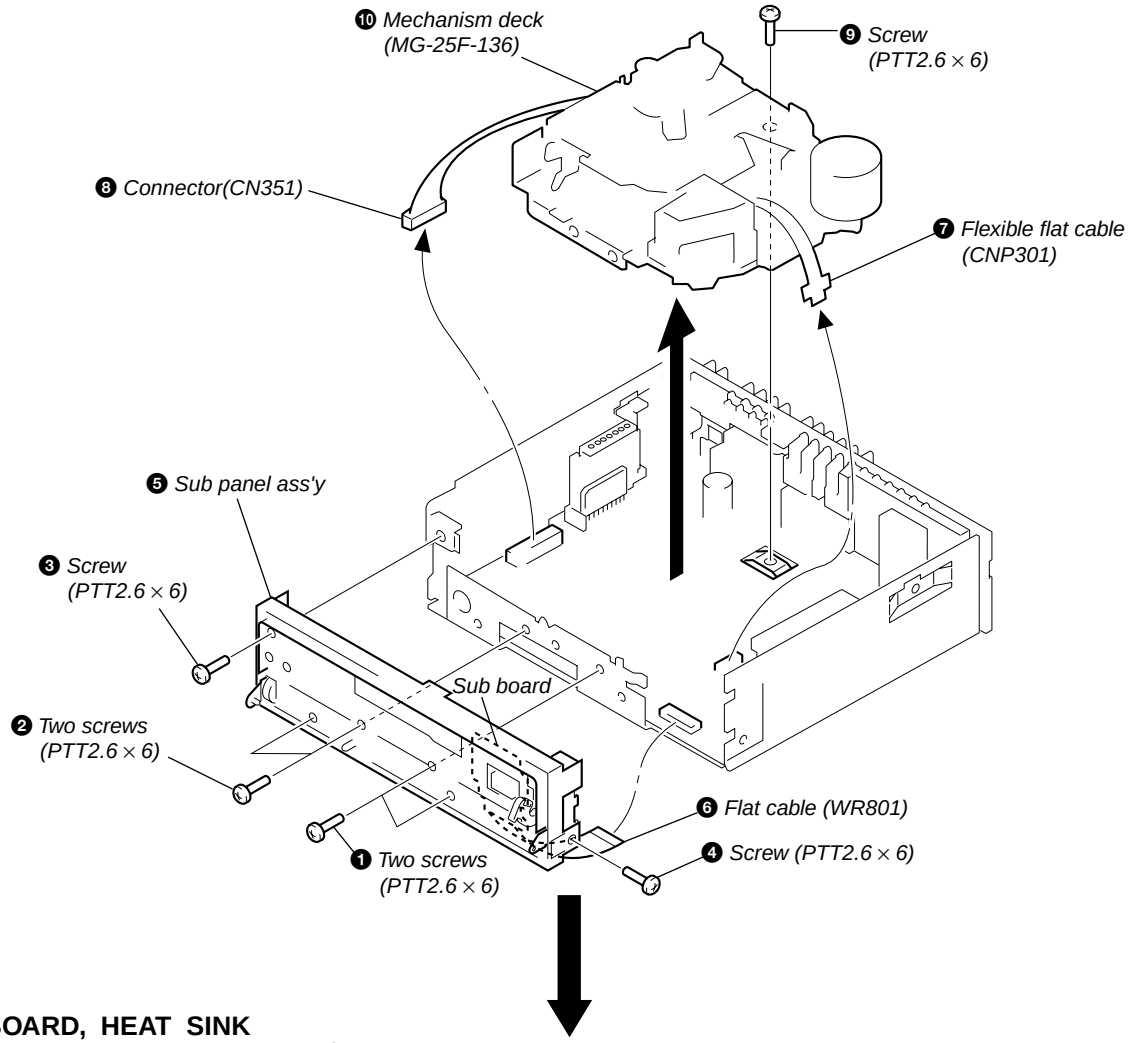
***註***
- *務必在接放大器之前連接地線。*
- *如果您連接了選購件的功率放大器而不使用內裝的放大器，將無嗶聲功能。*

**ملاحظات**
- *تأكد من توصيل سلك التأريض قبل توصيل المضخم.*
- *إذا قمت بتوصيل مضخم قدرة إختياري ولم تستخدم مضخم داخلي سوف يتم تعطيل مفعول الصوت "بيب".*

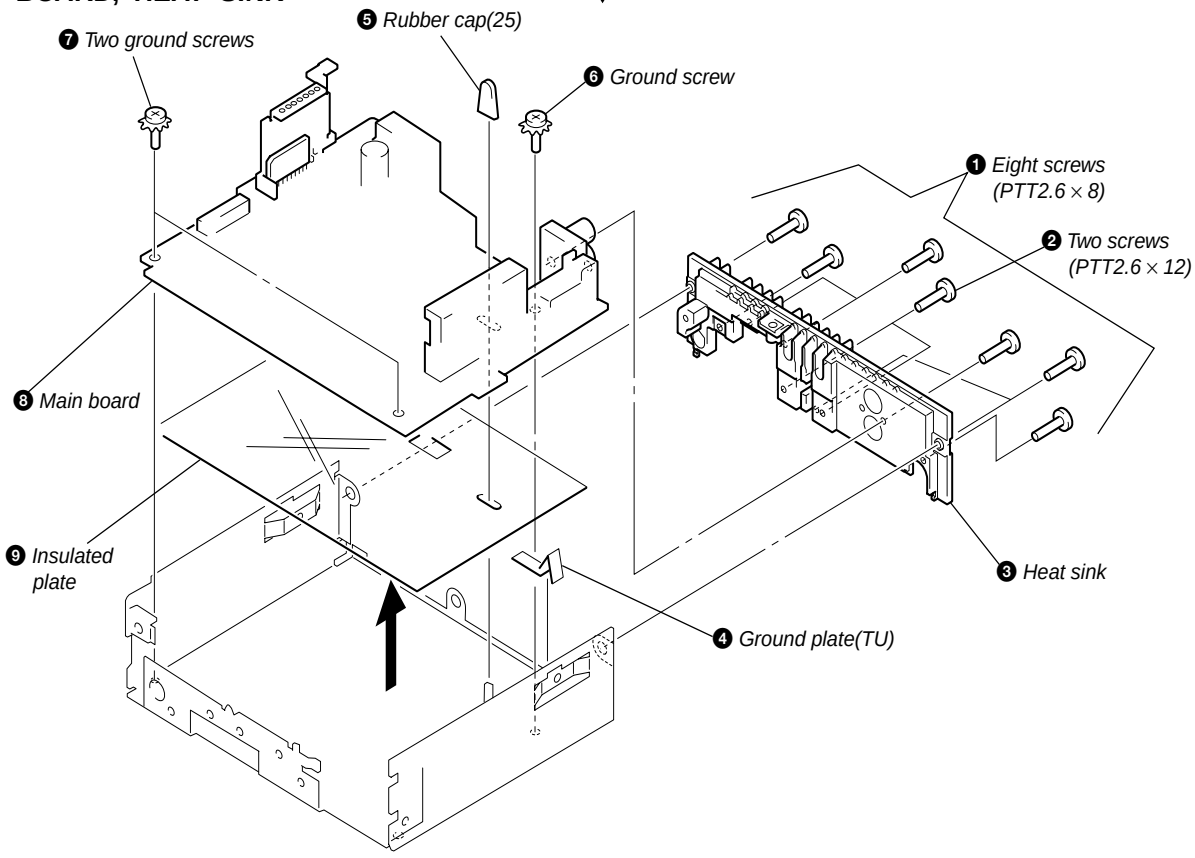
# SECTION 3
# DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical order given.

## SUB PANEL, MECHANISM DECK (MG-25F-136)


❿ Mechanism deck (MG-25F-136)
❾ Screw (PTT2.6 × 6)
❽ Connector(CN351)
❼ Flexible flat cable (CNP301)
❺ Sub panel ass'y
❸ Screw (PTT2.6 × 6)
Sub board
❷ Two screws (PTT2.6 × 6)
❻ Flat cable (WR801)
❹ Screw (PTT2.6 × 6)
❶ Two screws (PTT2.6 × 6)

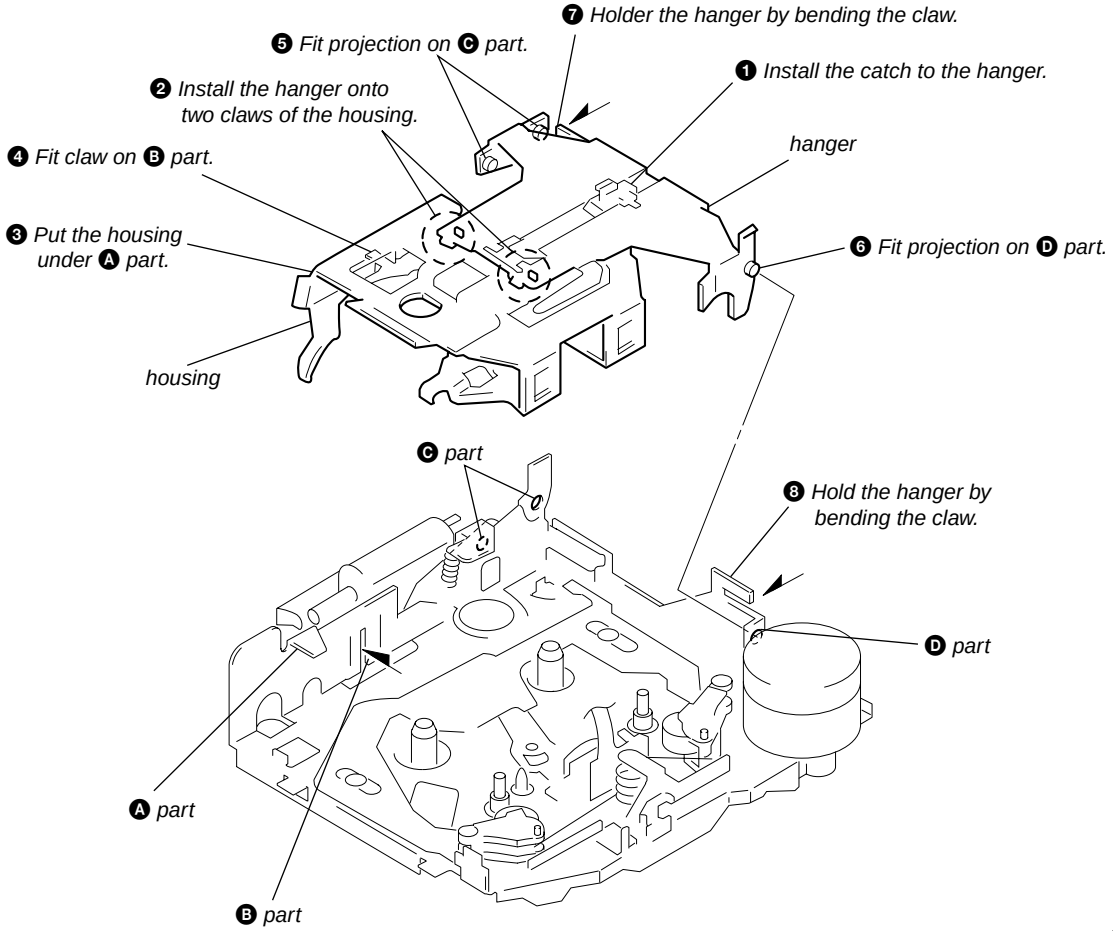
## MAIN BOARD, HEAT SINK



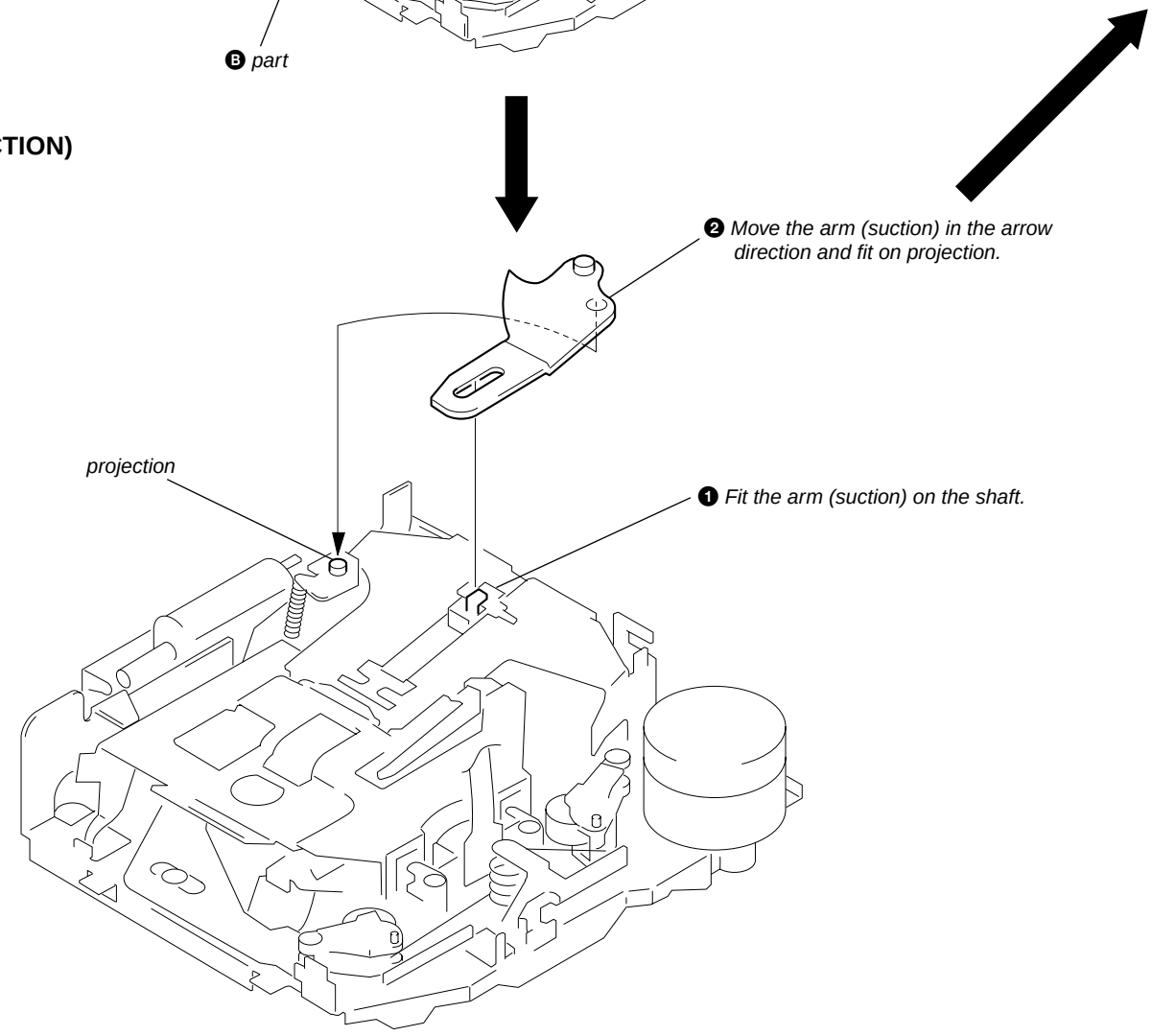
# SECTION 4
# ASSEMBLY OF MECHANISM DECK

**Note:** Follow the assembly procedure in the numerical order given.

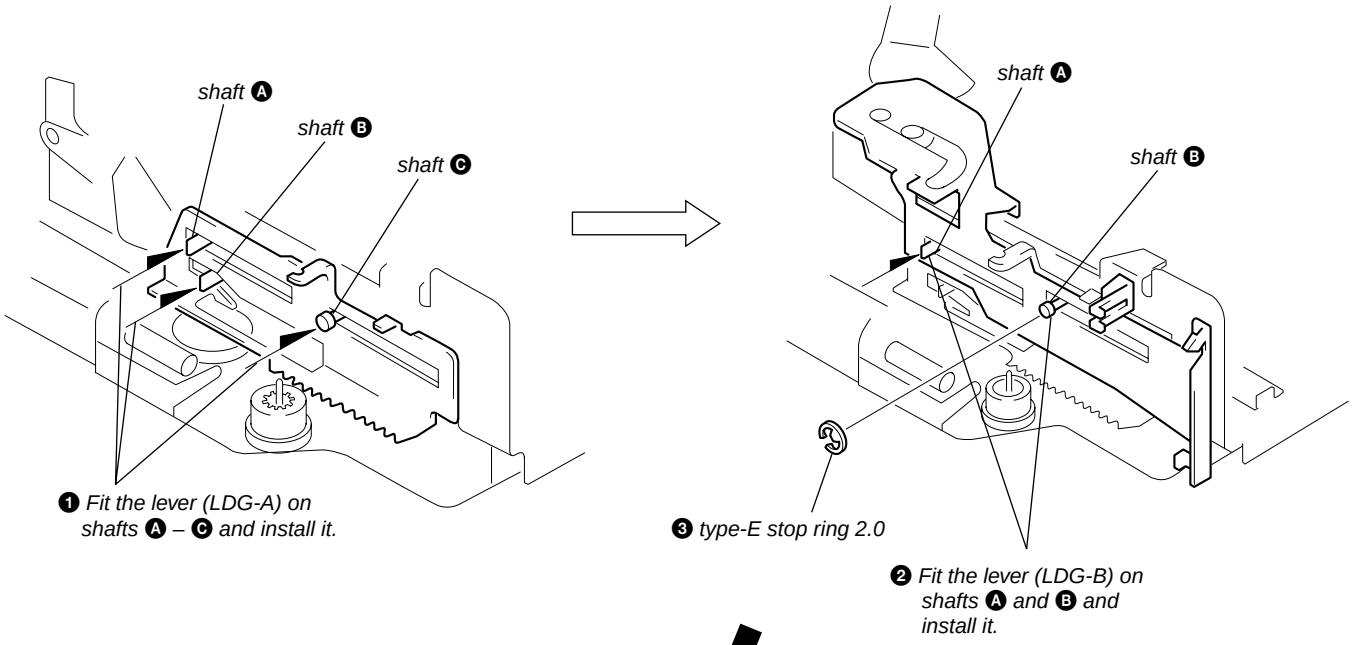
## HOUSING


❼ Holder the hanger by bending the claw.
❺ Fit projection on Ⓒ part.
❶ Install the catch to the hanger.
❷ Install the hanger onto two claws of the housing.
hanger
❹ Fit claw on Ⓑ part.
❸ Put the housing under Ⓐ part.
❻ Fit projection on Ⓓ part.
housing
Ⓒ part
❽ Hold the hanger by bending the claw.
Ⓓ part
Ⓐ part
Ⓑ part

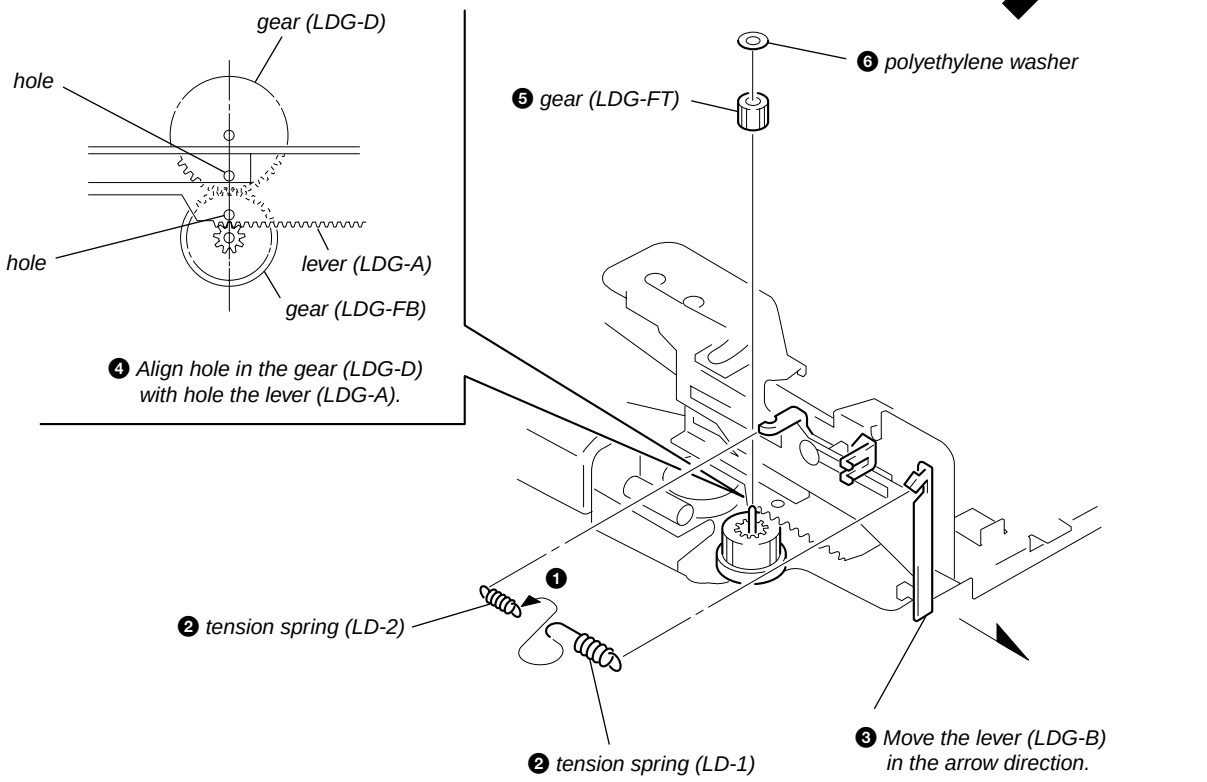
## ARM (SUCTION)



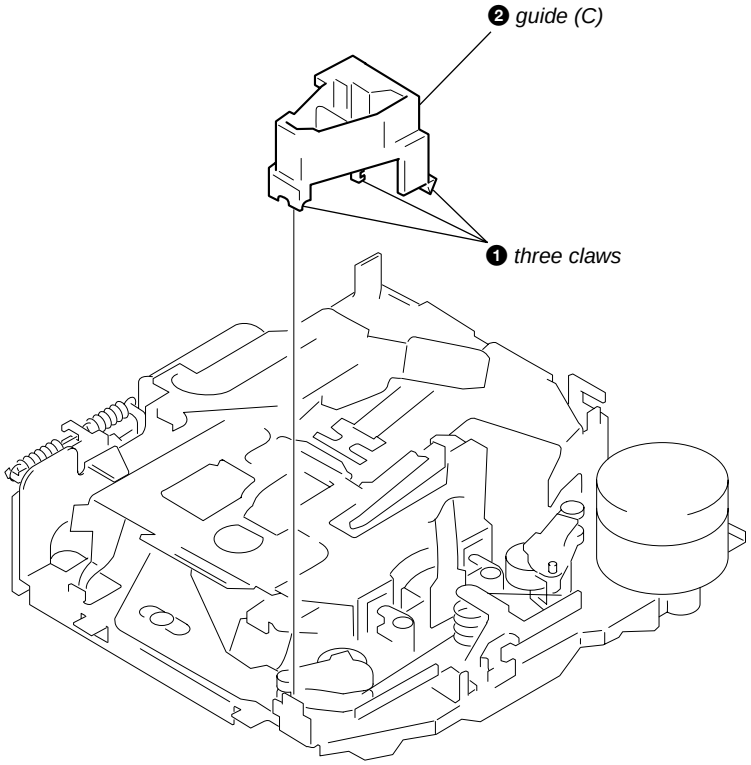
## LEVER (LDG-A)/(LDG-B)


shaft Ⓐ
shaft Ⓑ
shaft Ⓒ
❶ Fit the lever (LDG-A) on shafts Ⓐ – Ⓒ and install it.
shaft Ⓐ
shaft Ⓑ
❸ type-E stop ring 2.0
❷ Fit the lever (LDG-B) on shafts Ⓐ and Ⓑ and install it.

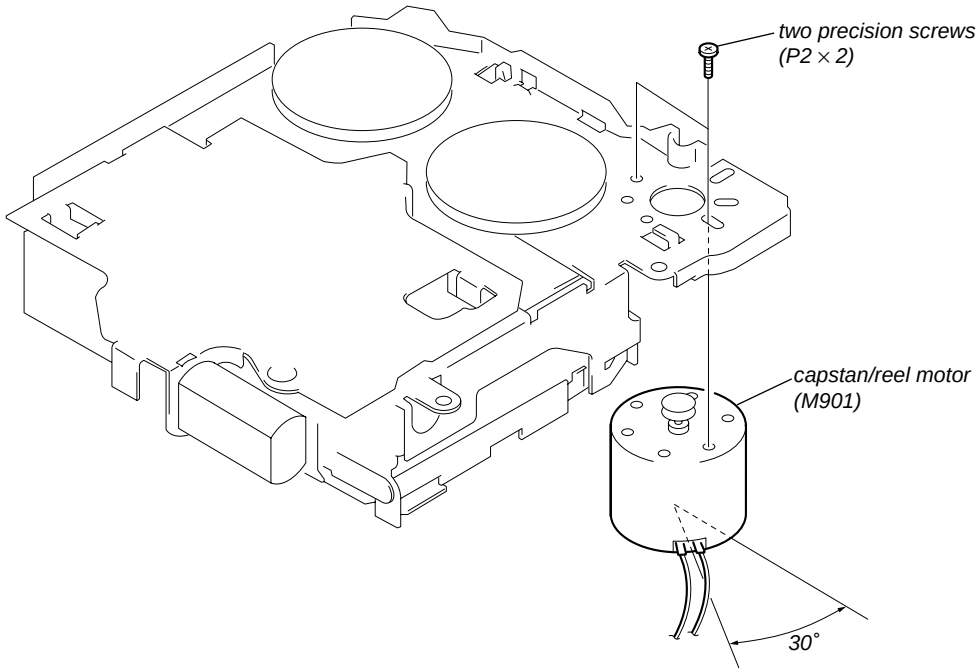
## GEAR (LDG-FT)



## GUIDE (C)




## MOUNTING POSITION OF CAPSTAN/REEL MOTOR (M901)



# SECTION 5
# MECHANICAL ADJUSTMENTS

1. Clean the following parts with a denatured-alcohol-moistened swab:
   playback head  pinch roller
   rubber belt  capstan
   idlers
2. Demagnetize the playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the power supply voltage unless otherwise noted.

**• Torque Measurement**

| Mode | Torque Meter | Meter Reading |
|---|---|---|
| Forward | CQ-102C | 2.95 – 6.37 N•m<br>30 – 65 g•cm<br>(0.42 – 0.90 oz•inch) |
| Forward<br>Back Tension | CQ-102C | 0.05 – 0.44 N•m<br>0.5 – 4.5 g•cm<br>(0.01 – 0.06 oz•inch) |
| Reverse | CQ-102RC | 2.95 – 6.37 N•m<br>30 – 65 g•cm<br>(0.42 – 0.90 oz•inch) |
| Reverse<br>Back Tension | CQ-102RC | 0.05 – 0.044 N•m<br>0.5 – 4.5 g•cm<br>(0.01 - 0.06 oz•inch) |
| FF, REW | CQ-201B | 5.89 – 19.61N•m<br>60 – 200 g•cm<br>(0.83 – 2.78 oz•inch) |

**• Tape Tension Measurement**

| Mode | Tension Meter | Meter Reading |
|---|---|---|
| Forward | CQ-403A | more than 0.88N<br>more than 90 g<br>(more than 3.18 oz) |
| Reverse | CQ-403R | more than 0.88N<br>more than 90 g<br>(more than 3.18 oz) |

# SECTION 6
# ELECTRICAL ADJUSTMENTS

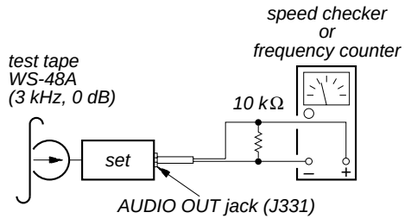
## 6-1. TEST MODE

<Set the Test Mode>
1. Set the "OFF" mode.
2. Push the preset [4] button.
3. Push the preset [5] button.
4. Press the preset [1] button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test mode>
1. Push the [OFF] button.

**TAPE DECK SECTION** 0 dB=0.775 V

**Tape Speed Adjustment**
**Setting:**




**Procedure:**
1. Put the set into the FWD PB mode.
2. Adjust adjustment resistor for inside capstan motor so that the reading on the speed checker or frequency counter becomes in specification.

**Specification:** Constant speed

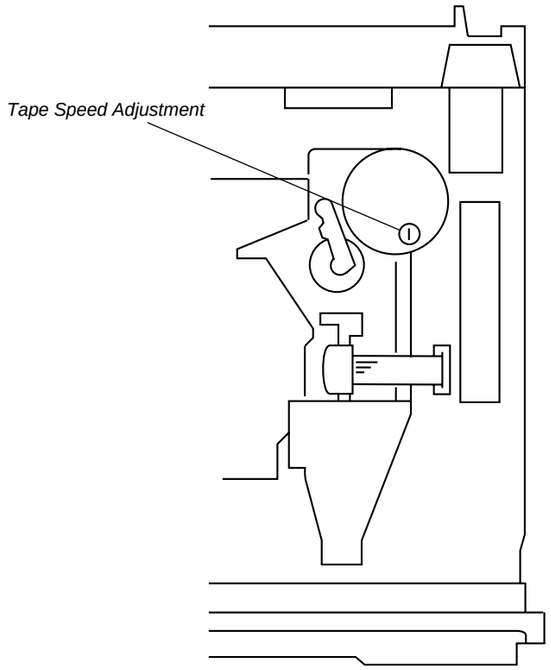
| Speed checker | Frequency counter |
|---|---|
| –1.5 to +2.5% | 2,955 to 3,075 Hz |

**TUNER SECTION** 0 dB=1 µV

The tuner section has no adjustment.

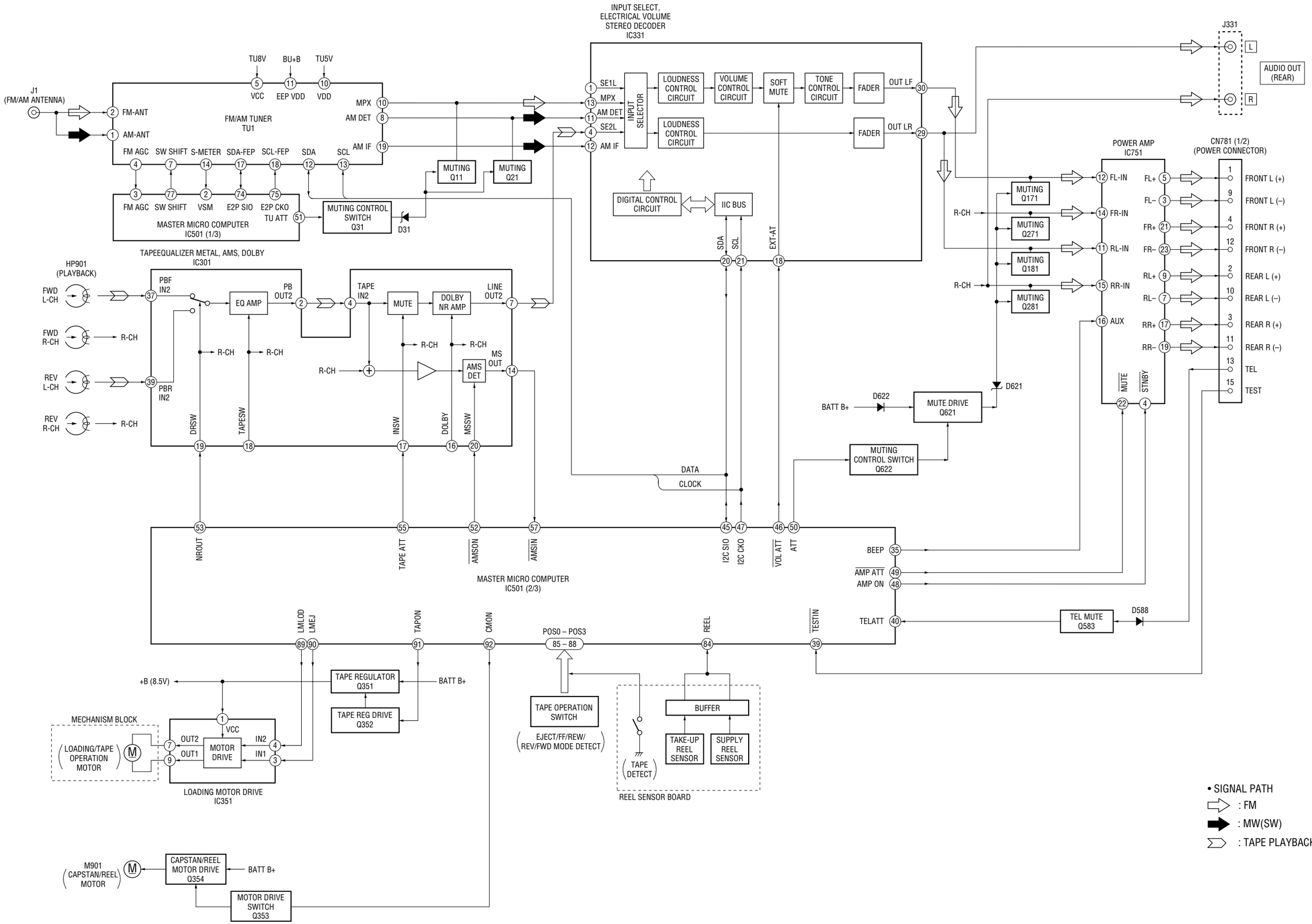
**Adjustment Location:**

*– SET UPPER VIEW –*



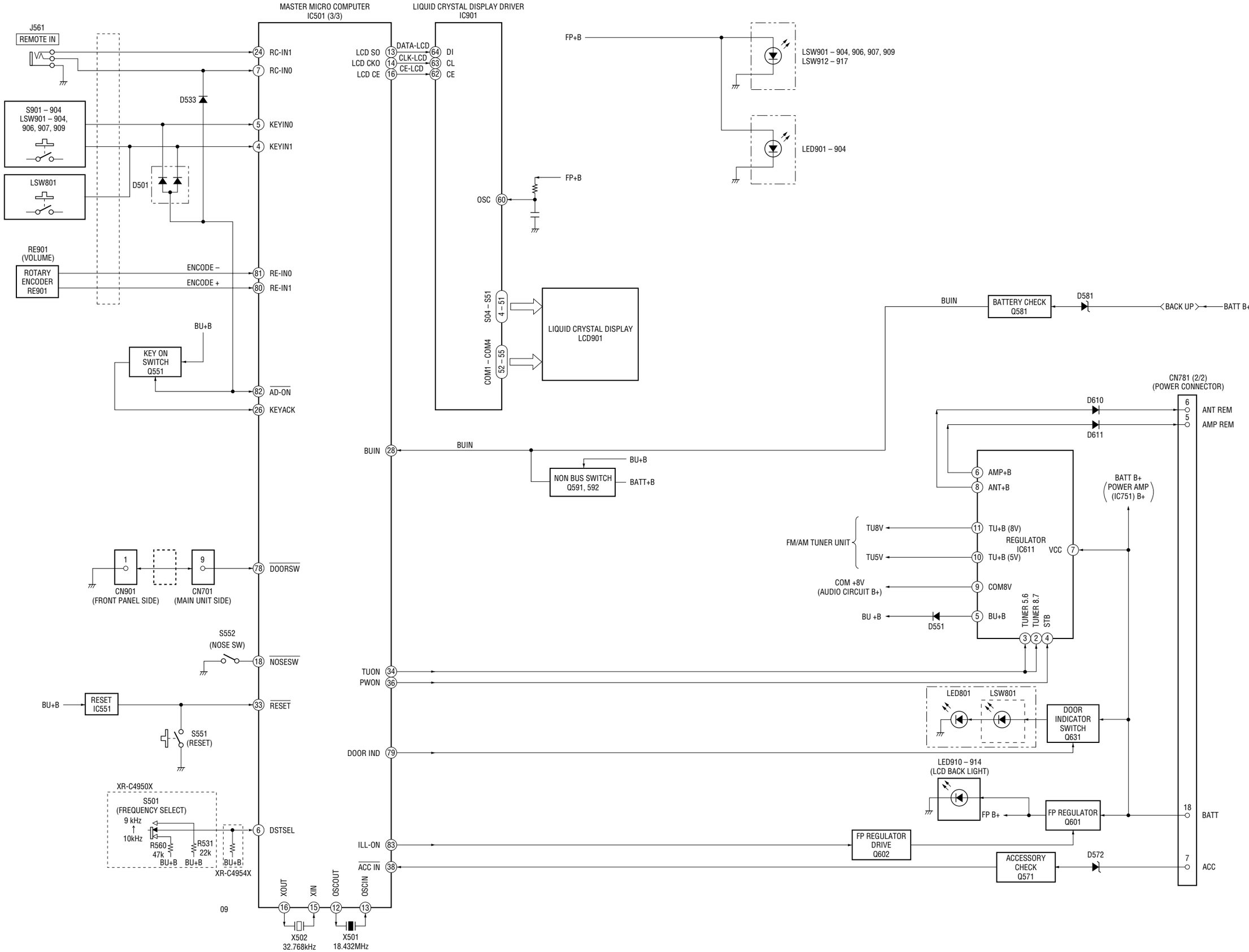
# SECTION 7
# DIAGRAMS

## 7-1. BLOCK DIAGRAMS – TUNER/TAPE/MAIN SECTION –




09

## – DISPLAY/KEY CONTROL/BUS CONTROL/POWER SUPPLY SECTION –



**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**
**(In addition to this, the necessary note is printed in each block.)**

**For schematic diagrams.**

**Note:**

- All capacitors are in µF unless otherwise noted. pF: µµF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- ▭ : panel designation.
- B + : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT+ cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  no mark: FM
  ( ) : MW (SW)
  < > : TAPE PLAYBACK
  ✻ : Impossible to measure
- Voltages are taken with a VOM (Input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : MW (SW)
  ⇨ : TAPE PLAYBACK

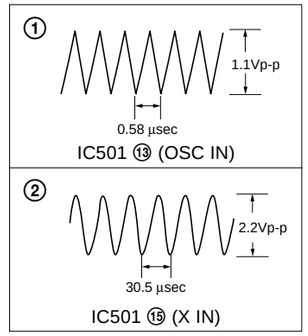
**For printed wiring boards.**

**Note:**

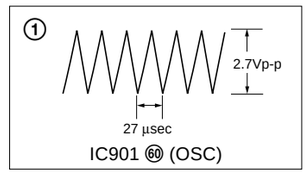
- o——— : parts extracted from the component side.
- ——— : parts extracted from the conductor side.
- ▒▒▒ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:
Pattern face side: Parts on the pattern face side seen from the (Conductor Side) pattern face are indicated.
Parts face side: Parts on the parts face side seen from the (Component Side ) parts face are indicated.

## WAVEFORMS
## – MAIN BOARD –



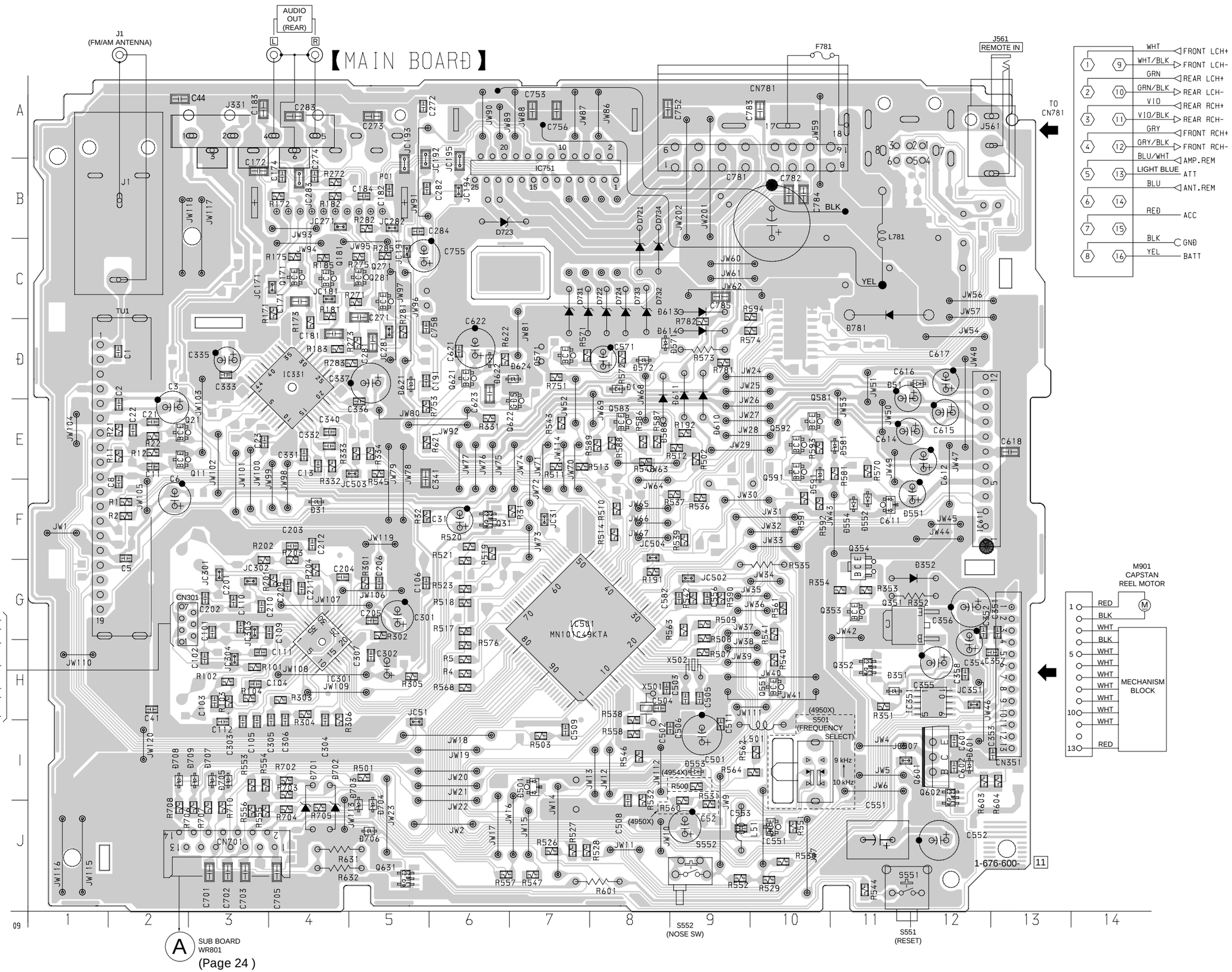

## – KEY BOARD –



## 7-2. PRINTED WIRING BOARD – MAIN BOARD –

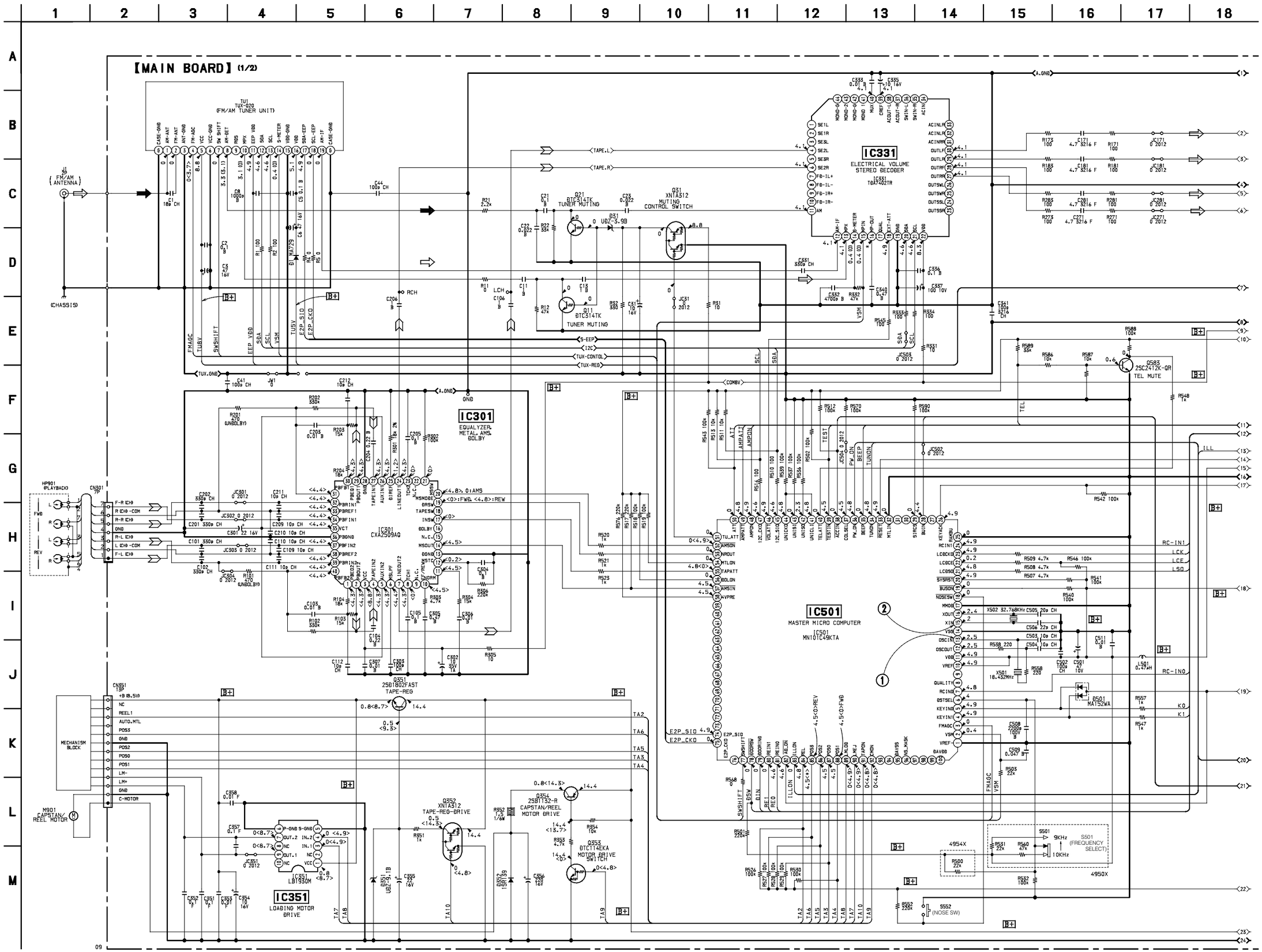
- **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D1 | D-8 |
| D31 | F-4 |
| D51 | D-12 |
| D351 | H-11 |
| D352 | G-12 |
| D501 | I-7 |
| D551 | F-11 |
| D552 | F-11 |
| D553 | I-9 |
| D554 | F-11 |
| D571 | D-8 |
| D572 | D-8 |
| D581 | E-11 |
| D588 | E-8 |
| D591 | E-10 |
| D601 | I-12 |
| D610 | D-9 |
| D611 | D-9 |
| D613 | C-9 |
| D614 | D-9 |
| D621 | D-5 |
| D622 | D-6 |
| D624 | D-7 |
| D701 | J-4 |
| D702 | J-4 |
| D703 | J-5 |
| D704 | J-5 |
| D705 | I-3 |
| D706 | J-5 |
| D707 | I-3 |
| D708 | I-2 |
| D709 | I-3 |
| D721 | C-8 |
| D722 | C-7 |
| D723 | B-6 |
| D724 | C-8 |
| D731 | C-7 |
| D732 | C-8 |
| D733 | C-8 |
| D734 | C-8 |
| D781 | C-11 |
| | |
| IC301 | H-4 |
| IC331 | D-4 |
| IC351 | H-12 |
| IC501 | G-7 |
| IC551 | J-10 |
| IC611 | E-12 |
| IC751 | B-7 |
| | |
| Q11 | E-2 |
| Q21 | E-2 |
| Q31 | F-6 |
| Q171 | C-4 |
| Q181 | C-4 |
| Q271 | C-5 |
| Q281 | C-5 |
| Q351 | G-11 |
| Q352 | H-11 |
| Q353 | G-11 |
| Q354 | G-11 |
| Q551 | H-10 |
| Q571 | D-7 |
| Q581 | E-10 |
| Q583 | E-8 |
| Q591 | E-10 |
| Q592 | E-10 |
| Q601 | I-12 |
| Q602 | I-12 |
| Q621 | D-6 |
| Q622 | E-7 |
| Q631 | J-5 |



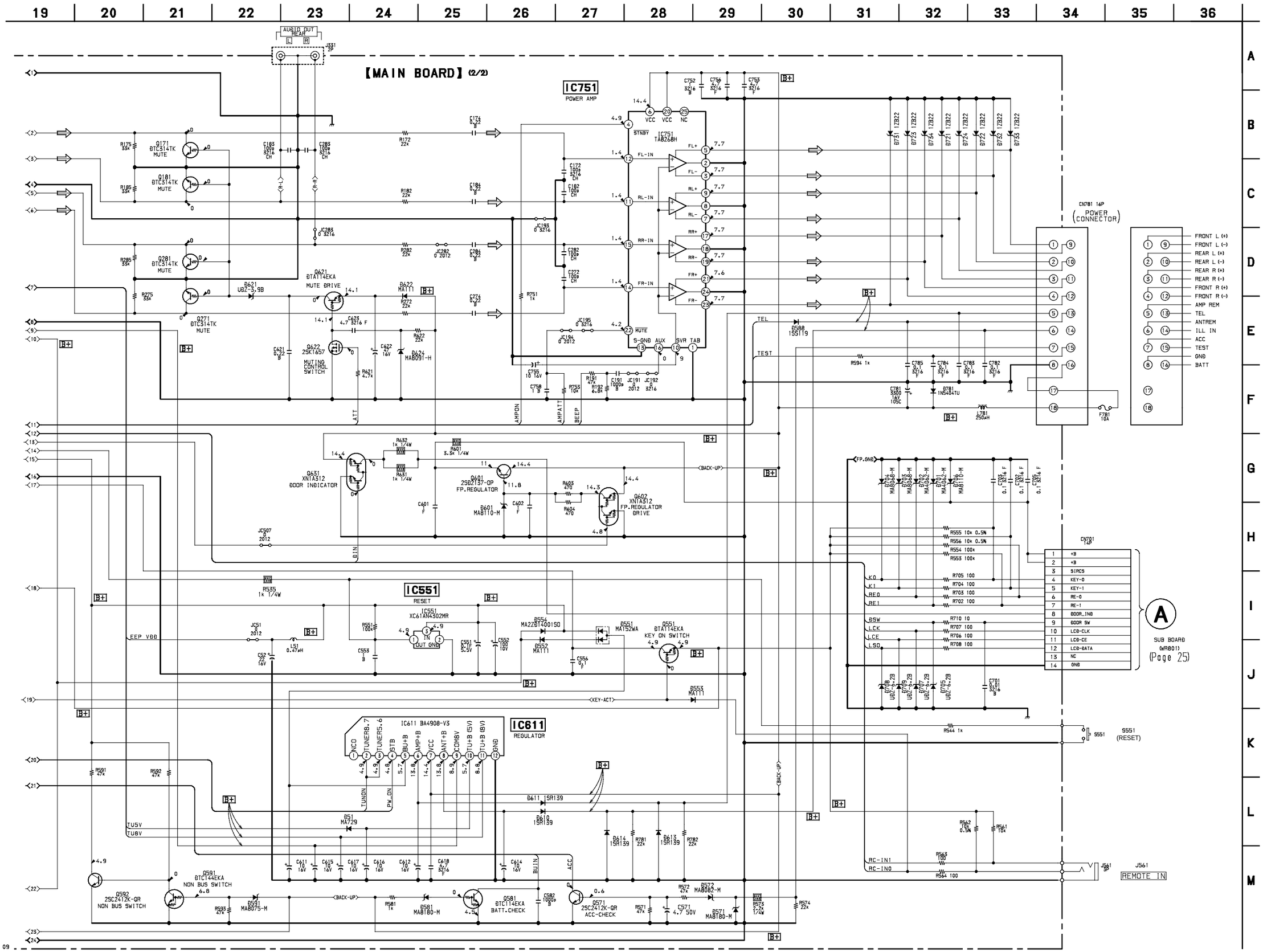
## 7-3. SCHEMATIC DIAGRAM – MAIN BOARD (1/2) –


- See page 20 for Waveforms.
- See page 21 for Printed Wiring Board.
- See page 26 for IC Block Diagrams.
- See page 27 for IC Pin Function.

## 7-4. SCHEMATIC DIAGRAM – MAIN BOARD (2/2) –

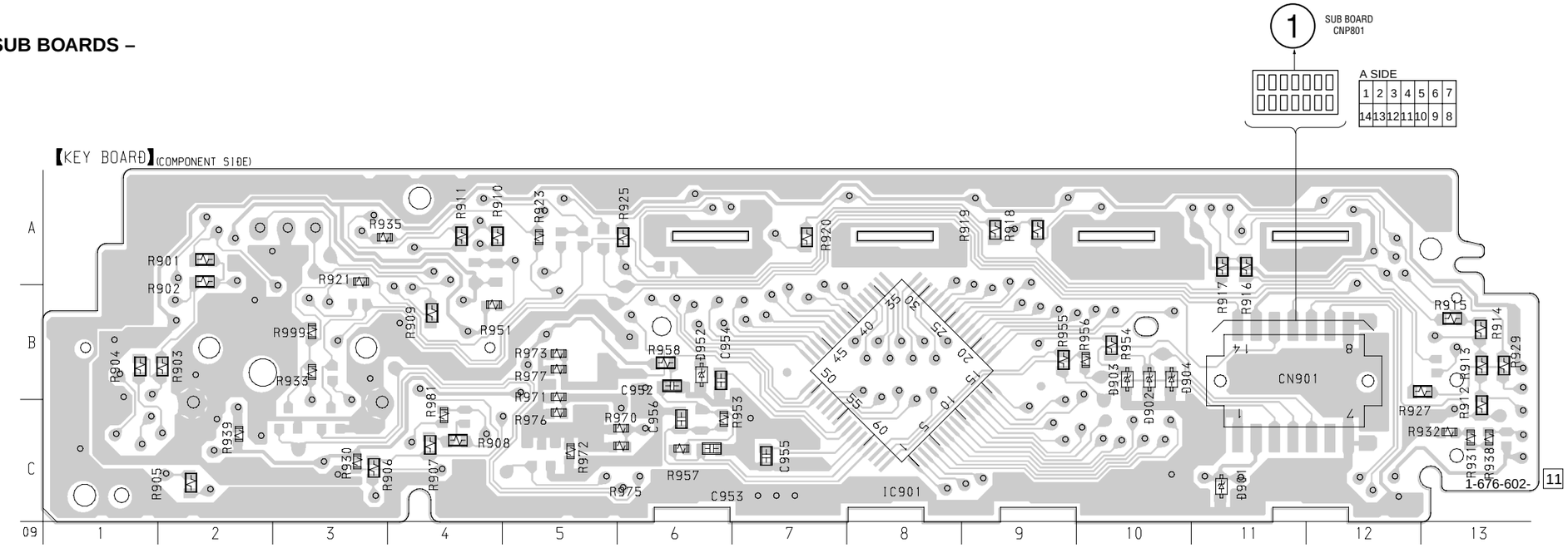

- See page 21 for Printed Wiring Board.
- See page 26 for IC Block Diagrams.

## 7-5. PRINTED WIRING BOARDS – KEY/SUB BOARDS –

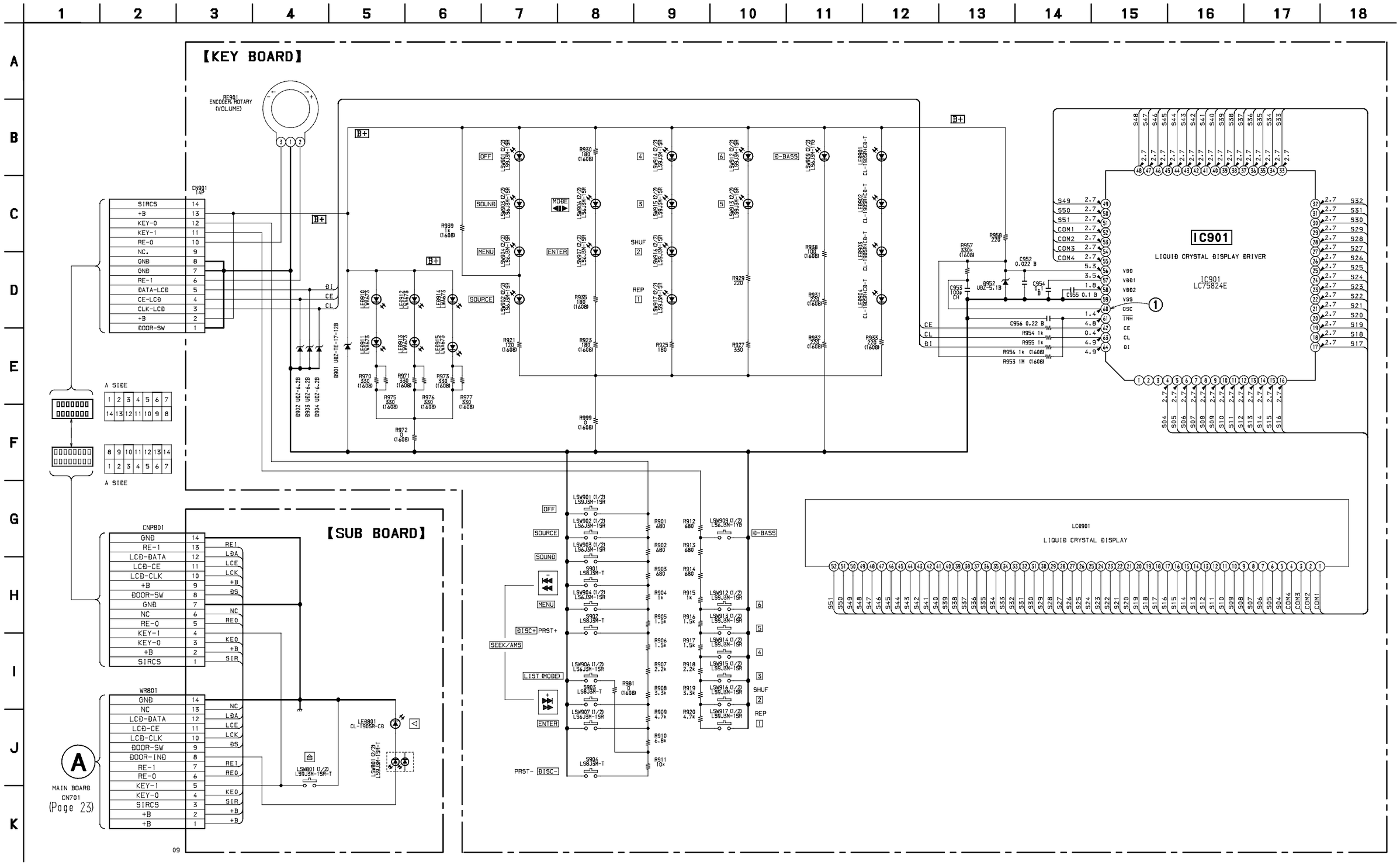
- **Semiconductor Location**

| Ref. No. | Location |
|---|---|
| D901 | C-11 |
| D902 | B-10 |
| D903 | B-10 |
| D904 | B-10 |
| D952 | B-6 |
| IC901 | B-8 |



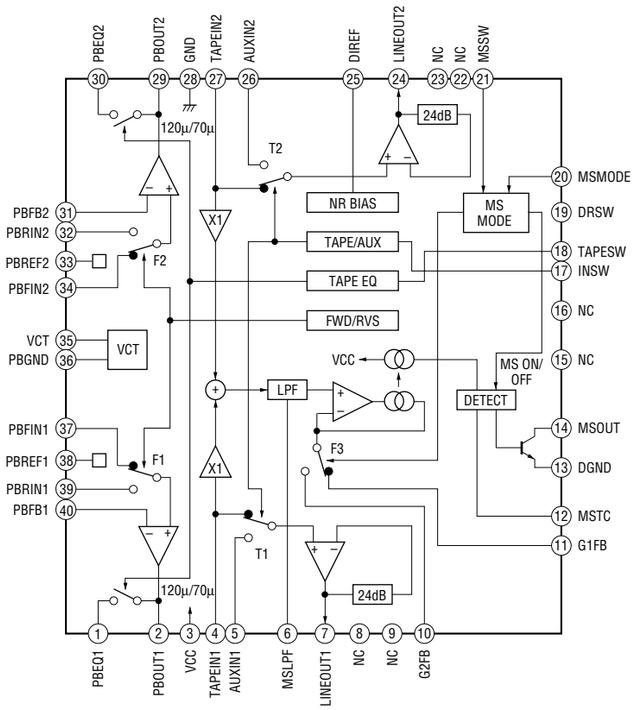
## 7-6. SCHEMATIC DIAGRAMS – KEY/SUB BOARDS –

• See page 20 for Waveform.

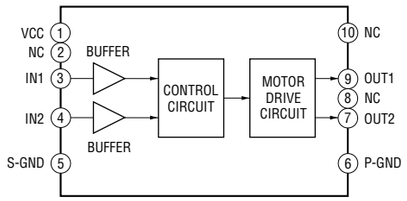


## 7-7. IC BLOCK DIAGRAMS

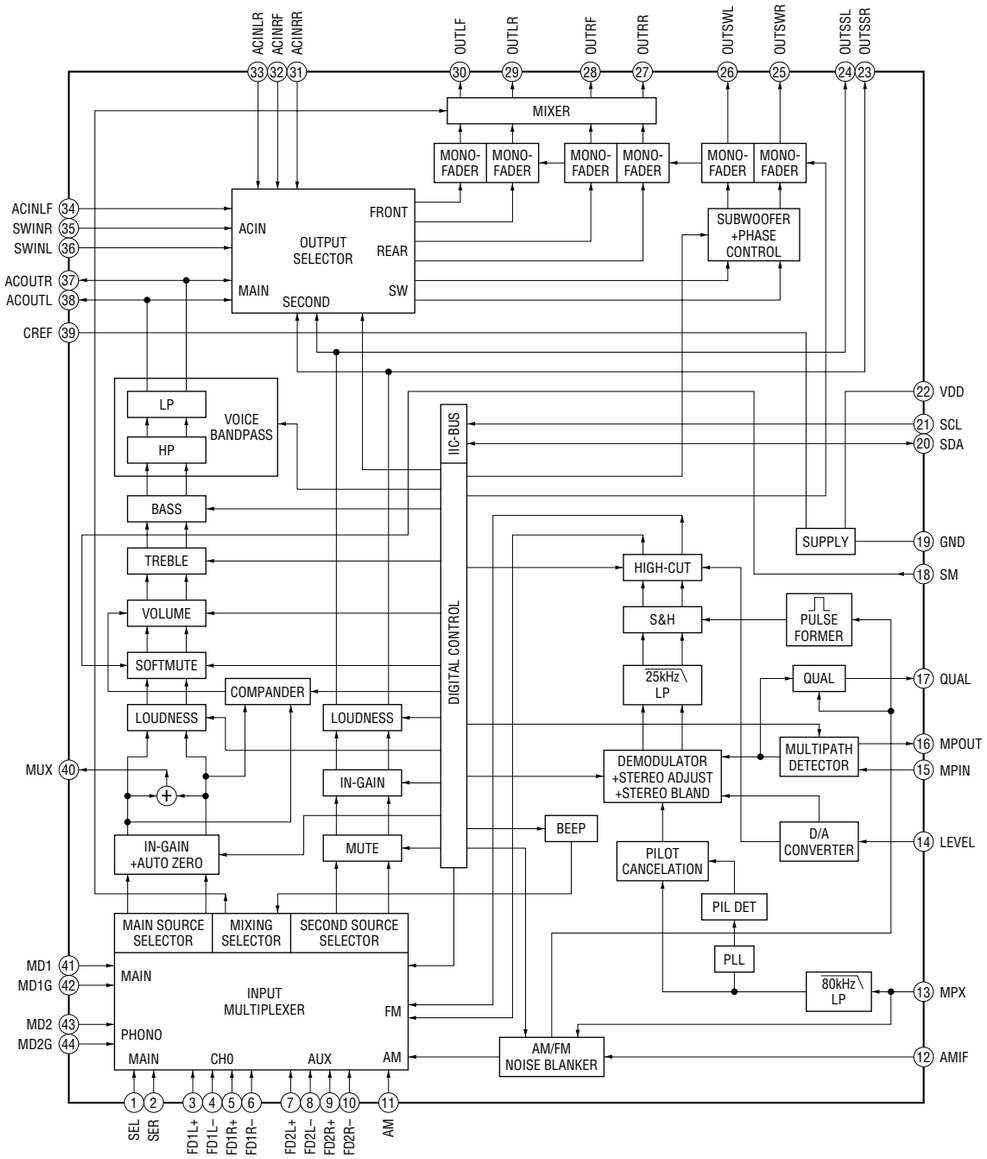
### IC301 CXA2509AQ-T4



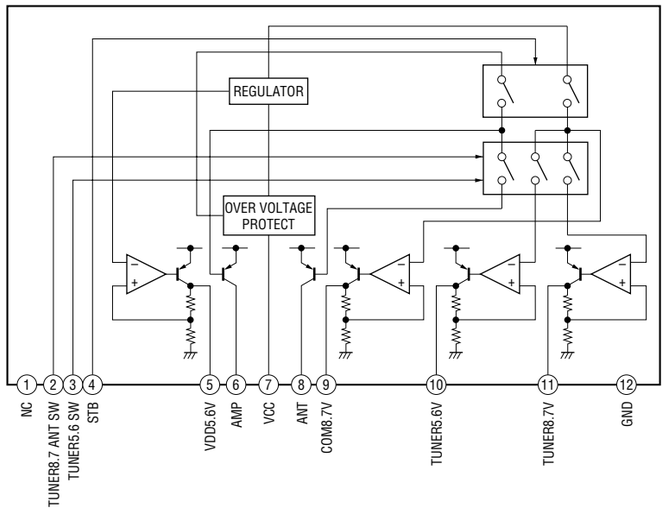

### IC351 LB1930M-TLM




### IC331 TDA7402TR




### IC611 BA4908-V3



## 7-8. IC PIN FUNCTION

**• IC501 MASTER MICRO COMPUTER (MN101C49KTA) (MAIN Board)**

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 1 | VREF | — | Reference voltage (– side) of AD conversion Connect to power ground if no problems such as noise |
| 2 | VSM | I | FM/AM common signal meter A/D conversion input terminal<br>AM (MW:SW:LW), FM S meter voltage detection terminal |
| 3 | FMAGC | I | FM AGC A/D conversion input terminal<br>FM AGC voltage detection terminal |
| 4 | KEYIN1 | I | KEY input |
| 5 | KEYIN0 | I | Use the AD conversion input |
| 6 | DSTSEL | I | Terminal for selecting and setting destination value Reads during reset |
| 7 | RCIN0 | I | Rotary commander input<br>Use the AD conversion input |
| 8, 9 | QUALITY | O | Not used |
| 10 | VREF | — | Reference voltage (+ side) of AD conversion As current is always flowing, make sure that current is supplied only when the power of the system is turned ON by the master microprocessor |
| 11 | VDD | — | Power supply terminal |
| 12 | OSCOUT | O | Terminal connected to the oscillator |
| 13 | OSCIN | I | Connected to the 18.432 MHz oscillator |
| 14 | VSS | — | Ground terminal |
| 15 | XIN | I | Terminal connected to the sub-clock (for clock) oscillator |
| 16 | XOUT | O | Connected to the 32.768 kHz oscillator |
| 17 | MMOD | — | Ground terminal |
| 18 | $\overline{\text{NOSESW}}$ | I | Front panel disconnection/attachment detection input terminal<br>A panel is present when “L” |
| 19 | $\overline{\text{BUSON}}$ | O | BUS ON control output<br>Outputs “L” when UNI-LINK communication is activated |
| 20 | $\overline{\text{SYSRST}}$ | O | SYSTEM RESET control output<br>Outputs “L” when the UNI-LINK slave microprocessor is reset |
| 21 | LCDSO | O | LCD serial data output<br>Serial interface with LCD driver IC<br>Outputs “L” when OFF to prevent misoperations of the C-MOS port |
| 22 | LCDCE | O | LCD chip enable output terminal<br>Serial interface with LCD driver IC Outputs<br>“L” when OFF to prevent misoperations of the C-MOS port |
| 23 | LCDCKO | O | LCD serial clock output<br>Serial interface with LCD driver IC<br>Outputs “L” when OFF to prevent misoperations of the C-MOS port |
| 24 | RCIN1 | I | Rotary Commander Shift input terminal<br>Rotary Commander Shift input |
| 25 | RAMBU | I | RAM reset detection input<br>After clearing input reset to check if the RAM data has been damaged by decreasing voltage, checks the RAM data within 50 ms Results<br>L= Clears the RAM as the power supply voltage of the microprocessor dropped belowthe minimum data maintenance voltage<br>H= Checks the RAM damage check area as the power supply voltage of the microproces sor has not dropped below the minimum data maintenance voltage<br>Clears the RAM if the RAM damage check area is damaged |

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 26 | KEYACK | I | Key input acknowledge<br>Acknowledge signal input terminal to accept the function and eject key from the power off state<br>The A/D conversion input power supply is off to save power in the power off state, and key inputs cannot be accepted by A/D<br>This terminal can therefore determine if function keys have been pressed even in the power off state When the microprocessor is in the HALT mode, the HALT mode is cleared using this interrupt |
| 27 | | O | Not used |
| 28 | BUIN | I | BACK-UP detection input terminal<br>Input terminal to detect power supply back-up Used as interrupt<br>The circuit is set so that it becomes “H” level when above 8.5+-0.3V<br>When the microprocessor is in the operating mode, detects changes in the backup by detecting the rising edge, falling edge, and both edges of the interrupt request flag<br>When the micropro cessor is in the HALT mode, it can be cleared from this mode using this interrupt |
| 29 | SIRCS | I | Remote control input<br>Use the interrupt input port<br>When not using this terminal, be sure to fix at “H” or “L” |
| 30, 31 | NCO | O | Not used |
| 32 | MTLIN | O | |
| 33 | $\overline{\text{RESET}}$ | O | Reset input terminal<br>Reset at “L” level |
| 34 | TUNON | O | TUNER power supply control output terminal<br>Active during tuner ON (includes sub- reception, ATA mode on) |
| 35 | BEEP | O | Buzzer control output<br>Terminal for driving piezoelectric buzzer to produce beep sound |
| 36 | PW_ON | O | System power supply control output<br>Controls power on/off of the system power supply (turned on when the unit operates)<br>Outputs “H” when the power is on, and “L” when off |
| 37 | COLSEL | I | Xplod model acknowledge terminal<br>Sets the slave illumination to amber when “H” Amber when “L” |
| 38 | $\overline{\text{ACCIN}}$ | I | Accessory power supply detection input<br>Input terminal to detect accessory Accessory is present when “L” is input |
| 39 | $\overline{\text{TESTIN}}$ | I | Test mode setting input terminal<br>Input terminal for setting the unit into the test mode<br>When this port becomes L during microprocessor reset or while the backup changes fromOFF to ON, the test mode is set Once test mode 1 is set, the TEST input is not detected in the following backup OFF/ON and test mode 1 is continued Press the OFF button or RESET to clear To set the test mode while the backup power changes from OFF to ON, if the power is ON, set test mode 1 and turn the power OFF<br><br>If the above fails, do not check the TEST input while the backup power changes from OFF to ON Check only during POWER OFF |
| 40 | TELATT | I | TELEPHONE MUTE detection input<br>Performs audio 20dB attenuation in the input on state<br>Set to the input on state at “H” |

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 41 | UNICLI | I | Serial clock input<br>UNI-LINK serial interface clock input terminal |
| 42 | UNISO | O | Serial data output<br>UNI-LINK serial interface data output terminal |
| 43 | UNISI | I | Serial data input<br>UNI-LINK serial interface data input terminal |
| 44 | UNICKO | O | Serial clock output<br>UNI-LINK serial interface clock output terminal |
| 45 | I2C_SIO | I/O | $I^2C$ bus serial data input/output<br>Serial interface with electronic volume IC, TUX-020 |
| 46 | $\overline{\text{VOLATT}}$ | O | Electronic volume mute control output terminal<br>Mute terminal for electronic volume |
| 47 | I2_CKO | O | $I^2C$ bus serial clock output<br>Serial interface with electronic volume IC, TUX-020 |
| 48 | AMPON | O | Power amplifier STANDBY control output<br>Performs standby on/off control of the power amplifier and power IC |
| 49 | $\overline{\text{AMPATT}}$ | O | Power amplifier mute control output terminal<br>Mute terminal during AMPON output ON/OFF |
| 50 | ATT | O | System MUTE control output<br>Mute control output of audio signal line output stage<br>Set the electronic volume also to - ∞ during active<br>Outputs “H” when mute is ON<br>Immediately sets into the input state during BU-INOFF |
| 51 | TU_ATT | O | Tuner mute control output terminal<br>Controls FM and AM outputs from TUX |
| 52 | $\overline{\text{AMSON}}$ | O | Outputs “L” during AMS |
| 53 | NROUT | O | FOR/REV control output<br>Controls tape running direction<br>Outputs “H” in the forward direction and “L” in the reverse direction |
| 54 | MTLON | I/O | Metal control input/output<br>Switches between metal on/off  MTL is present when initial “L” is input<br>Outputs “H” during  MTL ON |
| 55 | TAPATT | O | Tape mute control output<br>FF and REW are active during ATA operations<br>Outputs “H” during mute on when the EQ IC is connected |
| 56 | DOLON | I/O | Dolby control input/output<br>Sets the presence/absence of the Dolby function during the input mode during initialization<br>Switches DOLBY to on or off in the output mode normally<br>DOLBY is on when “L” is input  Outputs “H” during DOLBY ON |
| 57 | $\overline{\text{AMSIN}}$ | I | Sound presence/absence detection input during AMS<br>Detects if tape audio sound is present or absent<br>Sound is present when “L” is input and absent when “H” is input |
| 58 | 4VPRE | I | 4VPREOUT model acknowledge terminal<br>Acknowledges as 4VPREOUT model when “L”, and changes the gain amount of the electrical control IC |
| 59 to 69 | | O | Not used |
| 70 to 73 | NCO | O | Not used |

| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 74 | E2P_SIO | I/O | EEPROM communication terminal<br>EEPROM data input/output terminal |
| 75 | E2P_CKO | O | EEPROM communication terminal<br>EEPROM clock output terminal |
| 76 | NCO | O | Not used |
| 77 | SWSHIFT | O | AM filter control terminal<br>Outputs “L”during 2.94 to 5.585, 14.125 to 18.135 MHz during SW reception, and outputs “H” at other times |
| 78 | $\overline{\text{DOORSW}}$ | I | Front panel open/close detection input<br>Panel is closed when “L” |
| 79 | DOORIND | O | DOOR indicator output terminal<br>“H” is output when DOORSW is “H”<br>“L” is output when NOSESW is “H” |
| 80 | REIN1 | I | Rotary encoder input terminal |
| 81 | REIN0 | I | |
| 82 | $\overline{\text{AD\_ON}}$ | O | AD conversion power supply control output<br>When the KEYACK terminal for controlling the AVREF power supply to input key AD conversion inputs is active, “L” is output from this terminal to set the input possible state |
| 83 | ILLON | O | Illumination power supply control output<br>Output control terminal of the power supply for illumination of functions keys, etc.<br>Depends on pressing the OFF key for two seconds to turn it off<br>OFF key normally off, etc<br>Accessory power supply detection output input (ACCIN) active ..... on output<br>Inactive ..... off output<br>Pressing the OFF key for two seconds to turn it off, etc<br>System power supply control output (PW ON) active ..... on output<br>Inactive ..... off output<br>When on output= “H” output<br>When off output= “L” output |
| 84 | REL | I | Reel table rotation detection input<br>Used for detecting tape end using the terminal for detecting tape rotation |
| 85 | POS3 | I | Position signal detection input<br>Terminal for detecting tape position Connected to MD |
| 86 | POS2 | I | |
| 87 | POS0 | I | |
| 88 | POS1 | I | |
| 89 | LMLOD | O | Loading motor control output (Loading direction)<br>Rotates the loading motor in the normal direction using the tape control terminal |
| 90 | LMEJ | O | Loading motor control output (Ejection direction)<br>Rotates the loading motor in the reverse direction using the tape control terminal<br>Becomes active together with LM and LOD, and brakes the loading motor |
| 91 | TAPON | O | TAPE power supply control output<br>Capstan motor control output<br>Loading motor control output (Loading direction)<br>Loading motor control output (Ejection direction)<br>Outputs on when one of the above three ports is active<br>At other times, does not depend on off output and power output |
| 92 | CM ON | O | TAPE capstan motor control signal output terminal<br>Normally, linked with TAPON Outputs LOW when paused at TAPE BEHIND to stop the motor |

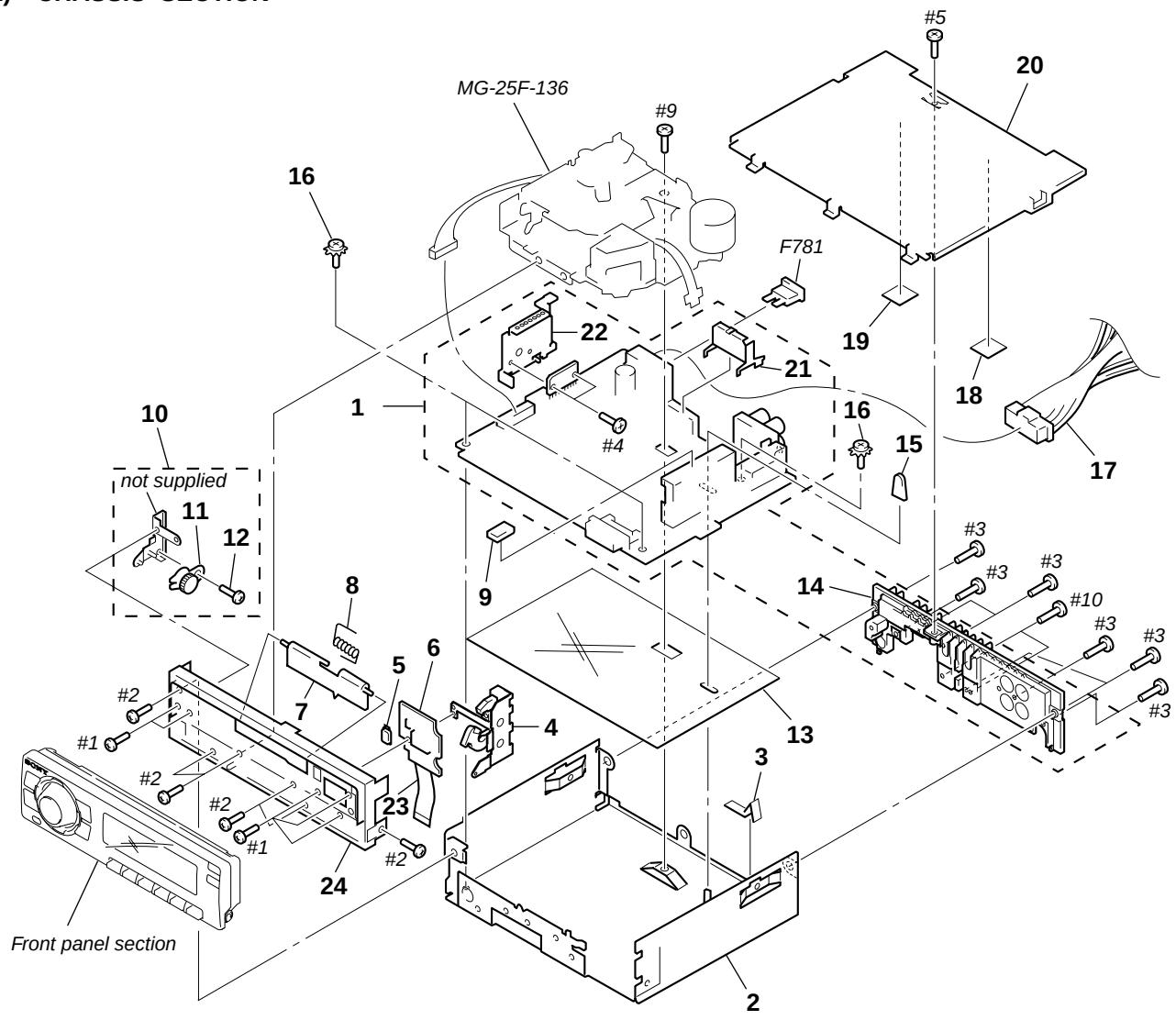
| Pin No. | Pin Name | I/O | Function |
|---|---|---|---|
| 93 | NCO | O | Not used |
| 94 | | O | |
| 95 | DAVSS | O | |
| 96 | NS_MASK | O | |
| 97 | | O | |
| 98 | | O | |
| 100 | DAVDD | O | |

# SECTION 8
# EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.

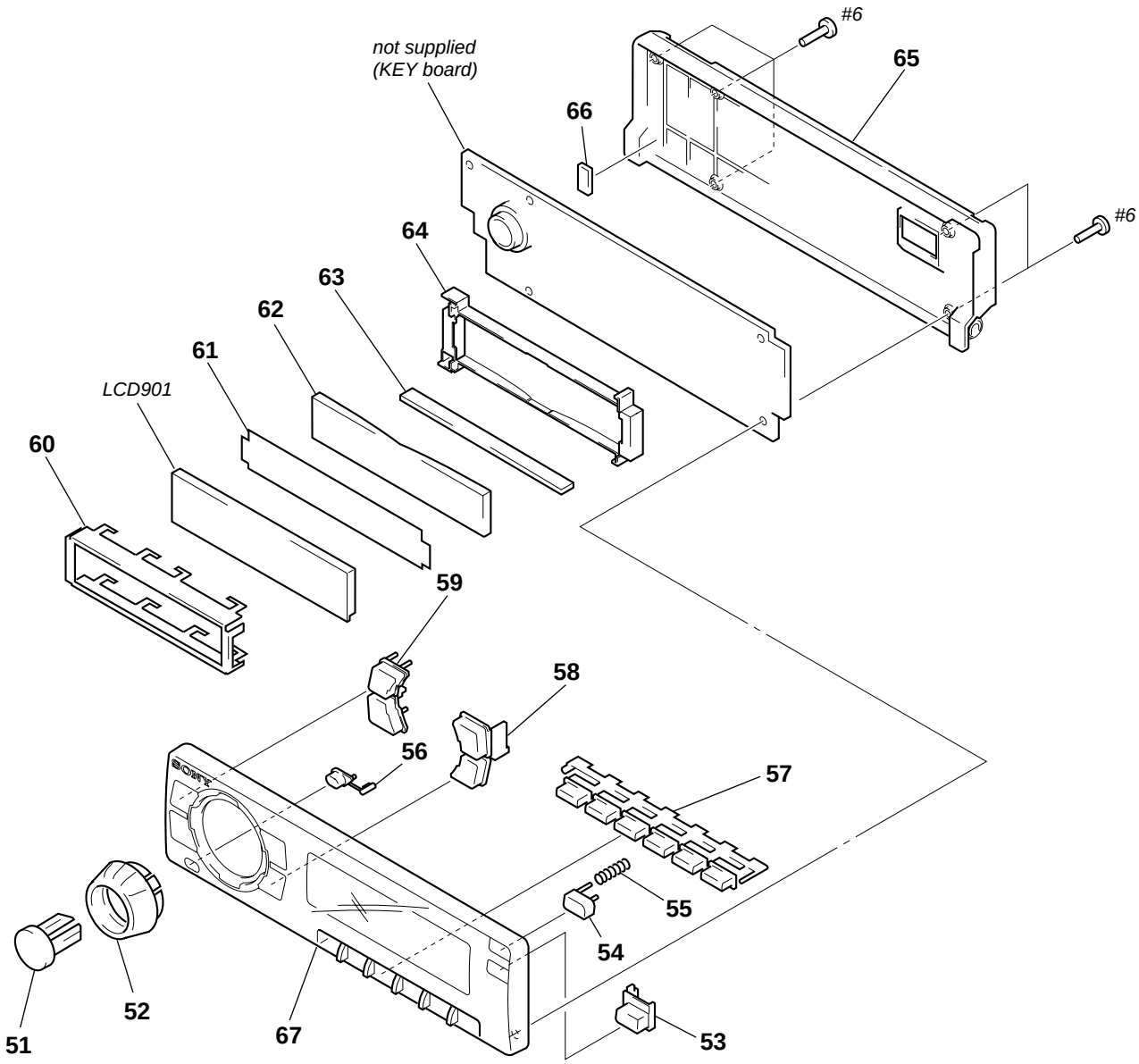
## (1) CHASSIS SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 1 | A-3326-142-A | MAIN BOARD, COMPLETE (4954X) | |
| * 1 | A-3326-146-A | MAIN BOARD, COMPLETE (4950X) | |
| * 2 | 3-040-994-01 | CHASSIS | |
| 3 | 3-045-878-01 | PLATE (TU), GROUND | |
| 4 | X-3377-621-2 | LOCK ASSY | |
| 5 | 3-040-990-01 | BUTTON (EJECT) | |
| * 6 | 1-676-603-11 | SUB BOARD | |
| 7 | 3-027-437-12 | DOOR, CASSETTE | |
| 8 | 3-935-003-01 | SPRING, TORSION | |
| 9 | 3-045-877-01 | CUSHION (TU) | |
| 10 | X-3376-699-2 | GEAR ASSY | |
| 11 | 3-030-909-02 | DAMPER, OIL | |
| 12 | 3-713-786-51 | SCREW +P 2X3 | |
| 13 | 3-045-828-01 | INSULATED PLATE | |

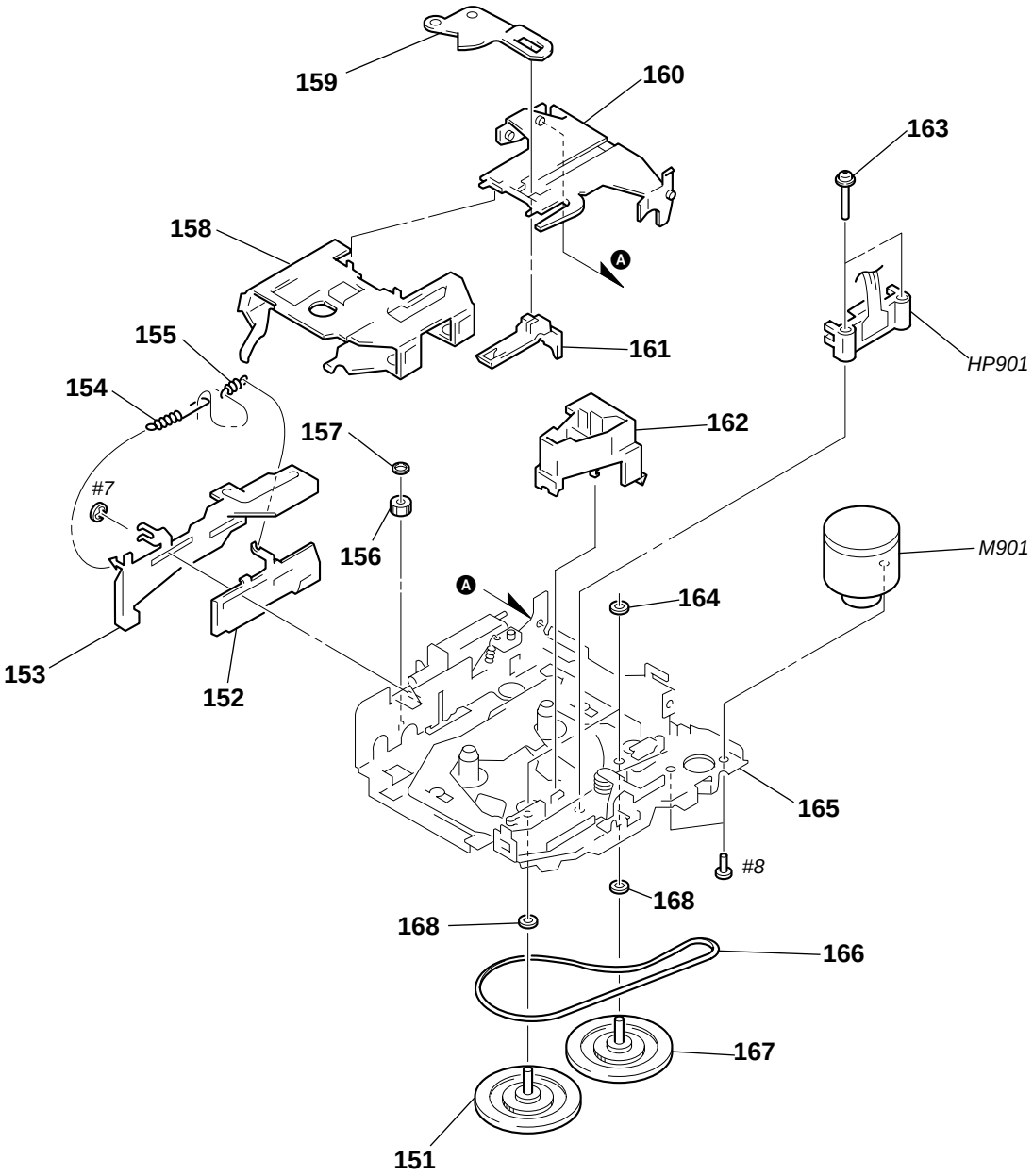
| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * 14 | 3-040-996-01 | HEAT SINK (2P) | |
| 15 | 3-012-859-01 | CAP (25), RUBBER | |
| 16 | 3-915-923-01 | SCREW, GROUND POINT | |
| 17 | 1-792-194-21 | CORD (WITH CONNECTOR)(POWER) | |
| * 18 | 3-046-991-01 | SPACER (COVER R) | |
| * 19 | 3-046-990-01 | SPACER (COVER L) | |
| * 20 | 3-040-995-01 | COVER | |
| * 21 | 3-040-998-01 | BLACKET (IC) | |
| * 22 | 3-041-262-01 | HEAT SINK (REG/XR) | |
| 23 | 1-792-195-11 | CABLE, FLEXIBLE FLAT | |
| 24 | X-3378-397-1 | PANEL ASSY, SUB | |
| F781 | 1-532-877-11 | FUSE (BLADE TYPE)(AUTO FUSE)(10A) | |

## (2) FRONT PANEL SECTION




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | 3-040-980-01 | BUTTON (SOURCE) | |
| 52 | 3-040-981-11 | KNOB (VOL) | |
| 53 | 3-041-005-11 | BUTTON (D) | |
| 54 | 3-040-989-01 | BUTTON (OPEN) | |
| 55 | 3-037-267-01 | SPRING (OPEN) | |
| 56 | 3-040-987-01 | BUTTON (OFF) | |
| 57 | 3-040-988-01 | BUTTON (1-6) | |
| 58 | 3-040-985-11 | BUTTON (DIR/ENTER) | |
| 59 | 3-040-986-01 | BUTTON (MENU/SOUND) | |
| * 60 | 3-040-997-01 | PLATE (LCD), GROUND | |
| * 61 | 3-041-371-02 | SHEET (REFLECTOR) | |
| * 62 | 3-040-993-01 | PLATE (LCD), LIGHT GUIDE | |
| 63 | 1-694-660-11 | CONDUCTIVE BOARD, CONNECTION | |
| * 64 | 3-040-992-01 | HOLDER (LCD) | |
| 65 | X-3378-398-1 | PANEL ASSY, FRONT BACK | |
| 66 | 3-045-596-01 | CUSHION (OFF) | |
| 67 | X-3378-578-1 | PANEL SUB ASSY (4950X) | |
| 67 | X-3378-579-1 | PANEL SUB ASSY (4954X) | |
| LCD901 | 1-803-907-41 | DISPLAY PANEL, LIQUID CRYSTAL | |

## (3) MECHANISM DECK SECTION (MG-25F-136)




| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | A-3291-667-A | CLUTCH (FR) ASSY | |
| * 152 | 3-019-130-01 | LEVER (LDG-A) | |
| * 153 | 3-019-131-01 | LEVER (LDG-B) | |
| 154 | 3-020-539-01 | SPRING (LD-1), TENSION | |
| 155 | 3-020-540-01 | SPRING (LD-2), TENSION | |
| 156 | 3-020-542-01 | GEAR (LOADING FT) | |
| 157 | 3-341-753-11 | WASHER, POLYETHYLENE | |
| 158 | 3-020-533-01 | HOUSING | |
| * 159 | 3-020-532-01 | ARM (SUCTION) | |
| 160 | 3-020-534-01 | HANGER | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| 161 | 3-933-346-01 | CATCHER | |
| 162 | 3-933-344-01 | GUIDE (C) | |
| 163 | 3-014-798-01 | SCREW (HEAD), SPECIAL | |
| 164 | 3-364-151-01 | WASHER | |
| 165 | A-3301-267-A | CHASSIS ASSY (G) | |
| 166 | 3-017-302-01 | BELT (25) | |
| 167 | 3-936-853-01 | FLYWHEEL (F) | |
| 168 | 3-701-437-21 | WASHER | |
| HP901 | 1-500-157-21 | HEAD, MAGNETIC (PLAYBACK) | |
| M901 | A-3291-665-A | MOTOR ASSY, MAIN (CAPSTAN/REEL) | |

# SECTION 9
# ELECTRICAL PARTS LIST

SUB MAIN

Note:

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: µ , for example:
  uA...: µ A..., uPA...: µ PA..., uPB...: µ PB..., uPC...: µ PC..., uPD...: µ PD...
- CAPACITORS
  uF : µ F
- COILS
  uH : µ H

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| * | 1-676-603-11 | SUB BOARD | |
| | | ********** | |
| | 1-792-195-11 | CABLE, FLEXIBLE FLAT | |
| | | < CONNECTOR > | |
| CNP801 | 1-794-064-11 | SOCKET, CONNECTOR 14P | |
| | | < DIODE > | |
| LED801 | 8-719-061-16 | DIODE CL-190SR-CD-T | |
| | | < SWITCH > | |
| LSW801 | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (⏏) | |
| ********** | | | |
| * | A-3326-146-A | MAIN BOARD, COMPLETE (4950X) | |
| | | ********** | |
| * | A-3326-142-A | MAIN BOARD, COMPLETE (4954X) | |
| | | ********** | |
| * | 3-040-996-01 | HEAT SINK (2P) | |
| * | 3-040-998-01 | BRACKET (IC) | |
| * | 3-041-262-01 | HEAT SINK (REG/XR) | |
| | 7-685-647-11 | SCREW +BVTP 3X10 TYPE2 N-S | |
| | 7-685-793-01 | SCREW +PTT 2.6X8 (S) | |
| | 7-685-795-01 | SCREW +PTT 2.6X12 (S) | |
| | | < CAPACITOR > | |
| C1 | 1-163-233-11 | CERAMIC CHIP 18PF 5.00% 50V | |
| C2 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C3 | 1-104-664-11 | ELECT 47UF 20.00% 16V | |
| C5 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C6 | 1-104-664-11 | ELECT 47UF 20.00% 16V | |
| C8 | 1-163-009-11 | CERAMIC CHIP 0.001uF 10% 50V | |
| C11 | 1-109-982-11 | CERAMIC CHIP 1UF 10.00% 10V | |
| C13 | 1-109-982-11 | CERAMIC CHIP 1UF 10.00% 10V | |
| C21 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C22 | 1-163-037-11 | CERAMIC CHIP 0.022uF 10% 25V | |
| C23 | 1-163-037-11 | CERAMIC CHIP 0.022uF 10% 25V | |
| C31 | 1-124-233-11 | ELECT 10UF 20.00% 16V | |
| C41 | 1-163-251-11 | CERAMIC CHIP 100PF 5.00% 50V | |
| C44 | 1-163-251-11 | CERAMIC CHIP 100PF 5.00% 50V | |
| C52 | 1-124-234-00 | ELECT 22uF 20% 16V | |
| C101 | 1-163-263-11 | CERAMIC CHIP 330PF 5.00% 50V | |
| C102 | 1-163-263-11 | CERAMIC CHIP 330PF 5.00% 50V | |
| C103 | 1-163-021-11 | CERAMIC CHIP 0.01UF 10.00% 50V | |
| C104 | 1-164-489-11 | CERAMIC CHIP 0.22UF 10.00% 16V | |
| C105 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C106 | 1-109-982-11 | CERAMIC CHIP 1UF 10.00% 10V | |
| C109 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | |
| C110 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | |
| C111 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | |
| C112 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | |
| C171 | 1-164-506-11 | CERAMIC CHIP 4.7UF 16V | |
| C172 | 1-163-181-00 | CERAMIC CHIP 100PF 5.00% 50V | |
| C174 | 1-164-489-11 | CERAMIC CHIP 0.22UF 10.00% 16V | |
| C181 | 1-164-506-11 | CERAMIC CHIP 4.7UF 16V | |
| C182 | 1-163-251-11 | CERAMIC CHIP 100PF 5.00% 50V | |
| C183 | 1-163-181-00 | CERAMIC CHIP 100PF 5.00% 50V | |
| C184 | 1-164-489-11 | CERAMIC CHIP 0.22UF 10.00% 16V | |
| C191 | 1-163-009-11 | CERAMIC CHIP 0.001uF 10% 50V | |
| C201 | 1-163-263-11 | CERAMIC CHIP 330PF 5.00% 50V | |
| C202 | 1-163-263-11 | CERAMIC CHIP 330PF 5.00% 50V | |
| C203 | 1-163-021-11 | CERAMIC CHIP 0.01UF 10.00% 50V | |
| C204 | 1-164-489-11 | CERAMIC CHIP 0.22UF 10.00% 16V | |
| C205 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C206 | 1-109-982-11 | CERAMIC CHIP 1UF 10.00% 10V | |
| C209 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | |
| C210 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | |
| C211 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | |
| C212 | 1-163-227-11 | CERAMIC CHIP 10PF 0.50PF 50V | |
| C271 | 1-164-506-11 | CERAMIC CHIP 4.7UF 16V | |
| C272 | 1-163-251-11 | CERAMIC CHIP 100PF 5.00% 50V | |
| C274 | 1-164-489-11 | CERAMIC CHIP 0.22UF 10.00% 16V | |
| C281 | 1-164-506-11 | CERAMIC CHIP 4.7UF 16V | |
| C282 | 1-163-251-11 | CERAMIC CHIP 100PF 5.00% 50V | |
| C283 | 1-163-181-00 | CERAMIC CHIP 100PF 5.00% 50V | |
| C284 | 1-164-489-11 | CERAMIC CHIP 0.22UF 10.00% 16V | |
| C301 | 1-124-234-00 | ELECT 22uF 20% 16V | |
| C302 | 1-131-353-00 | TANTALUM 10uF 10% 35V | |
| C303 | 1-163-251-11 | CERAMIC CHIP 100PF 5.00% 50V | |
| C304 | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V | |
| C305 | 1-107-823-11 | CERAMIC CHIP 0.47UF 10.00% 16V | |
| C306 | 1-163-021-11 | CERAMIC CHIP 0.01UF 10.00% 50V | |
| C307 | 1-163-021-11 | CERAMIC CHIP 0.01UF 10.00% 50V | |
| C331 | 1-163-263-11 | CERAMIC CHIP 330PF 5.00% 50V | |

# MAIN

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C332 | 1-163-017-00 | CERAMIC CHIP | 0.0047uF | 5% | 50V |
| C333 | 1-163-021-11 | CERAMIC CHIP | 0.01UF | 10.00% | 50V |
| C335 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C336 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C337 | 1-124-584-00 | ELECT | 100uF | 20% | 10V |
| C340 | 1-107-823-11 | CERAMIC CHIP | 0.47UF | 10.00% | 16V |
| C341 | 1-163-181-00 | CERAMIC CHIP | 100PF | 5.00% | 50V |
| C351 | 1-165-319-11 | CERAMIC CHIP | 0.1UF | | 50V |
| C352 | 1-165-319-11 | CERAMIC CHIP | 0.1UF | | 50V |
| C353 | 1-163-031-11 | CERAMIC CHIP | 0.01UF | | 50V |
| C354 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C355 | 1-124-234-00 | ELECT | 22uF | 20% | 16V |
| C356 | 1-126-934-11 | ELECT | 220UF | 20.00% | 16V |
| C357 | 1-165-319-11 | CERAMIC CHIP | 0.1UF | | 50V |
| C358 | 1-163-031-11 | CERAMIC CHIP | 0.01UF | | 50V |
| C501 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C502 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5.00% | 50V |
| C503 | 1-163-227-11 | CERAMIC CHIP | 10PF | 5.00% | 50V |
| C504 | 1-163-227-11 | CERAMIC CHIP | 10PF | 5.00% | 50V |
| C505 | 1-163-234-11 | CERAMIC CHIP | 20PF | 5.00% | 50V |
| C506 | 1-163-235-11 | CERAMIC CHIP | 22PF | 5.00% | 50V |
| C508 | 1-164-161-11 | CERAMIC CHIP | 0.0022uF | 10% | 100V |
| C509 | 1-163-809-11 | CERAMIC CHIP | 0.047uF | 10% | 25V |
| C511 | 1-163-021-11 | CERAMIC CHIP | 0.01UF | 10.00% | 50V |
| C551 | 1-125-710-11 | DOUBLE LAYER | 0.1F | | 5.5V |
| C552 | 1-104-665-11 | ELECT | 100UF | 20.00% | 10V |
| C553 | 1-109-982-11 | CERAMIC CHIP | 1UF | 10.00% | 10V |
| C556 | 1-165-319-11 | CERAMIC CHIP | 0.1UF | | 50V |
| C571 | 1-126-163-11 | ELECT | 4.7uF | 20% | 50V |
| C582 | 1-163-009-11 | CERAMIC CHIP | 0.001uF | 10% | 50V |
| C601 | 1-164-346-11 | CERAMIC CHIP | 1UF | | 16V |
| C602 | 1-164-346-11 | CERAMIC CHIP | 1UF | | 16V |
| C611 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C612 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C614 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C615 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C616 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C617 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C618 | 1-164-506-11 | CERAMIC CHIP | 4.7UF | | 16V |
| C621 | 1-164-489-11 | CERAMIC CHIP | 0.22UF | 10.00% | 16V |
| C622 | 1-124-589-11 | ELECT | 47uF | 20% | 16V |
| C623 | 1-164-506-11 | CERAMIC CHIP | 4.7UF | | 16V |
| C701 | 1-163-059-00 | CERAMIC CHIP | 0.01UF | 10.00% | 50V |
| C702 | 1-163-077-00 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C703 | 1-163-077-00 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C705 | 1-163-077-00 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C752 | 1-107-682-11 | CERAMIC CHIP | 1UF | 10.00% | 16V |
| C753 | 1-164-506-11 | CERAMIC CHIP | 4.7UF | | 16V |
| C755 | 1-124-233-11 | ELECT | 10UF | 20.00% | 16V |
| C756 | 1-164-506-11 | CERAMIC CHIP | 4.7UF | | 16V |
| C758 | 1-109-982-11 | CERAMIC CHIP | 1UF | 10.00% | 10V |
| C781 | 1-107-885-31 | ELECT | 3300UF | 20.00% | 16V |
| C782 | 1-163-077-00 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C783 | 1-163-077-00 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C784 | 1-163-077-00 | CERAMIC CHIP | 0.1uF | 10% | 25V |
| C785 | 1-163-077-00 | CERAMIC CHIP | 0.1uF | 10% | 25V |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < CONNECTOR > | |
| CN301 | 1-766-260-11 | CONNECTOR, FFC/FPC (ZIF) 7P | |
| * CN351 | 1-506-995-11 | PIN, CONNECTOR (PC BOARD) 13P | |
| CN701 | 1-784-456-11 | CONNECTOR, FFC/FPC 14P | |
| CN781 | 1-774-701-11 | PIN, CONNECTOR 16P (POWER CONNECTOR) | |
| | | < DIODE > | |
| D1 | 8-719-420-51 | DIODE MA729-TX | |
| D31 | 8-719-422-12 | DIODE UDZ-TE-17-3.9B | |
| D51 | 8-719-420-51 | DIODE MA729-TX | |
| D351 | 8-719-977-22 | DIODE UDZ-TE-17-9.1B | |
| D352 | 8-719-970-02 | DIODE 1SR139-400T-32 | |
| D501 | 8-719-400-20 | DIODE MA152WA-TX | |
| D551 | 8-719-400-20 | DIODE MA152WA-TX | |
| D552 | 8-719-073-01 | DIODE MA111-TX | |
| D553 | 8-719-073-01 | DIODE MA111-TX | |
| D554 | 8-719-072-70 | DIODE MA2ZD14001S0 | |
| D571 | 8-719-057-80 | DIODE MA8180-M-TX | |
| D572 | 8-719-420-14 | DIODE MA8082-M(TX) | |
| D581 | 8-719-057-80 | DIODE MA8180-M-TX | |
| D588 | 8-719-911-19 | DIODE 1SS119-25TD | |
| D591 | 8-719-422-76 | DIODE MA8075-M-TX | |
| D601 | 8-719-423-23 | DIODE MA8110-M-TX | |
| D610 | 8-719-970-02 | DIODE 1SR139-400T-32 | |
| D611 | 8-719-970-02 | DIODE 1SR139-400T-32 | |
| D613 | 8-719-970-02 | DIODE 1SR139-400T-32 | |
| D614 | 8-719-970-02 | DIODE 1SR139-400T-32 | |
| D621 | 8-719-422-12 | DIODE UDZ-TE-17-3.9B | |
| D622 | 8-719-073-01 | DIODE MA111-TX | |
| D624 | 8-719-422-97 | DIODE MA8091-H-TX | |
| D701 | 8-719-035-74 | DIODE MA4062-M(TA) | |
| D702 | 8-719-035-74 | DIODE MA4062-M(TA) | |
| D703 | 8-719-977-12 | DIODE MA8068-M-TX | |
| D704 | 8-719-977-12 | DIODE MA8068-M-TX | |
| D705 | 8-719-056-82 | DIODE UDZ-TE-17-6.2B | |
| D706 | 8-719-423-23 | DIODE MA8110-M-TX | |
| D707 | 8-719-056-82 | DIODE UDZ-TE-17-6.2B | |
| D708 | 8-719-056-82 | DIODE UDZ-TE-17-6.2B | |
| D709 | 8-719-056-82 | DIODE UDZ-TE-17-6.2B | |
| D721 | 8-719-079-42 | DIODE 1ZB22(TPA3) | |
| D722 | 8-719-079-42 | DIODE 1ZB22(TPA3) | |
| D723 | 8-719-079-42 | DIODE 1ZB22(TPA3) | |
| D724 | 8-719-079-42 | DIODE 1ZB22(TPA3) | |
| D731 | 8-719-079-42 | DIODE 1ZB22(TPA3) | |
| D732 | 8-719-079-42 | DIODE 1ZB22(TPA3) | |
| D733 | 8-719-079-42 | DIODE 1ZB22(TPA3) | |
| D734 | 8-719-079-42 | DIODE 1ZB22(TPA3) | |
| D781 | 8-719-049-38 | DIODE 1N5404TU | |
| | | < IC > | |
| IC301 | 8-752-079-78 | IC CXA2509AQ-T4 | |
| IC331 | 8-759-653-27 | IC TDA7402TR | |
| IC351 | 8-759-527-33 | IC LB1930M-TLM | |
| IC501 | 8-759-663-32 | IC MN101C49KTA | |
| IC551 | 8-759-574-61 | IC XC61AN4302MR | |
| IC611 | 8-759-661-47 | IC BA4908-V3 | |
| IC751 | 8-759-663-88 | IC TA8268H | |

| Ref. No. | Part No. | Description | | Remark |
|---|---|---|---|---|
| | | < JACK > | | |
| J1 | 1-764-808-21 | JACK (FM/AM ANTENNA) | | |
| J331 | 1-774-698-11 | JACK, PIN 2P (BUS AUDIO IN, AUDIO OUT REAR) | | |
| J561 | 1-566-822-41 | JACK (REMOTE IN) | | |
| | | < JUMPER RESISTOR > | | |
| JC31 | 1-216-295-00 | SHORT | 0 | |
| JC51 | 1-216-295-00 | SHORT | 0 | |
| JC171 | 1-216-295-00 | SHORT | 0 | |
| JC181 | 1-216-295-00 | SHORT | 0 | |
| JC191 | 1-216-295-00 | SHORT | 0 | |
| JC192 | 1-216-296-00 | SHORT | 0 | |
| JC193 | 1-216-296-00 | SHORT | 0 | |
| JC194 | 1-216-295-00 | SHORT | 0 | |
| JC195 | 1-216-296-00 | SHORT | 0 | |
| JC271 | 1-216-295-00 | SHORT | 0 | |
| JC281 | 1-216-295-00 | SHORT | 0 | |
| JC282 | 1-216-295-00 | SHORT | 0 | |
| JC283 | 1-216-296-00 | SHORT | 0 | |
| JC301 | 1-216-295-00 | SHORT | 0 | |
| JC302 | 1-216-295-00 | SHORT | 0 | |
| JC303 | 1-216-295-00 | SHORT | 0 | |
| JC304 | 1-216-295-00 | SHORT | 0 | |
| JC351 | 1-216-295-00 | SHORT | 0 | |
| JC502 | 1-216-295-00 | SHORT | 0 | |
| JC503 | 1-216-295-00 | SHORT | 0 | |
| JC504 | 1-216-295-00 | SHORT | 0 | |
| JC507 | 1-216-295-00 | SHORT | 0 | |
| | | < COIL > | | |
| L51 | 1-410-750-41 | INDUCTOR | 0.47uH | |
| L501 | 1-410-750-41 | INDUCTOR | 0.47uH | |
| L781 | 1-419-476-11 | INDUCTOR | 250uH | |
| | | < TRANSISTOR > | | |
| Q11 | 8-729-920-21 | TRANSISTOR | DTC314TK-T-146 | |
| Q21 | 8-729-920-21 | TRANSISTOR | DTC314TK-T-146 | |
| Q31 | 8-729-020-67 | TRANSISTOR | XN1A312-TX | |
| Q171 | 8-729-920-21 | TRANSISTOR | DTC314TK-T-146 | |
| Q181 | 8-729-920-21 | TRANSISTOR | DTC314TK-T-146 | |
| Q271 | 8-729-920-21 | TRANSISTOR | DTC314TK-T-146 | |
| Q281 | 8-729-920-21 | TRANSISTOR | DTC314TK-T-146 | |
| Q351 | 8-729-015-11 | TRANSISTOR | 2SD1802FAST-TL | |
| Q352 | 8-729-020-67 | TRANSISTOR | XN1A312-TX | |
| Q353 | 8-729-900-53 | TRANSISTOR | DTC114EKA-T146 | |
| Q354 | 8-729-106-60 | TRANSISTOR | 2SB1132-T100-R | |
| Q551 | 8-729-027-23 | TRANSISTOR | DTA114EKA-T146 | |
| Q571 | 8-729-120-28 | TRANSISTOR | 2SC2412K-T-146-QR | |
| Q581 | 8-729-900-53 | TRANSISTOR | DTC114EKA-T146 | |
| Q583 | 8-729-120-28 | TRANSISTOR | 2SC2412K-T-146-QR | |
| Q591 | 1-801-806-11 | TRANSISTOR | DTC144EKA-T146 | |
| Q592 | 8-729-120-28 | TRANSISTOR | 2SC2412K-T-146-QR | |
| Q601 | 8-729-423-99 | TRANSISTOR | 2SD2137-OP-TA | |
| Q602 | 8-729-020-67 | TRANSISTOR | XN1A312-TX | |
| Q621 | 8-729-027-23 | TRANSISTOR | DTA114EKA-T146 | |
| Q622 | 8-729-021-94 | TRANSISTOR | 2SK1657-T1B | |
| Q631 | 8-729-020-67 | TRANSISTOR | XN1A312-TX | |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| | | < RESISTOR > | | | |
| R1 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R2 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R4 | 1-216-295-00 | SHORT | 0 | | |
| R5 | 1-216-295-00 | SHORT | 0 | | |
| R11 | 1-216-295-00 | SHORT | 0 | | |
| R12 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W |
| R21 | 1-216-057-00 | METAL CHIP | 2.2K | 5% | 1/10W |
| R22 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R31 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R32 | 1-216-037-00 | METAL CHIP | 330 | 5% | 1/10W |
| R101 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R102 | 1-216-109-00 | METAL CHIP | 330K | 5% | 1/10W |
| R103 | 1-216-077-00 | RES-CHIP | 15K | 5% | 1/10W |
| R104 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W |
| R171 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R172 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R173 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R175 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R181 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R182 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R183 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R185 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R191 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W |
| R192 | 1-216-069-00 | METAL CHIP | 6.8K | 5% | 1/10W |
| R201 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R202 | 1-216-109-00 | METAL CHIP | 330K | 5% | 1/10W |
| R203 | 1-216-077-00 | RES-CHIP | 15K | 5% | 1/10W |
| R204 | 1-216-079-00 | METAL CHIP | 18K | 5% | 1/10W |
| R271 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R272 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R273 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R275 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R281 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R282 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R283 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R285 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R301 | 1-208-812-11 | RES-CHIP | 18K | 2% | 1/10W |
| R302 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R303 | 1-216-065-00 | RES-CHIP | 4.7K | 5% | 1/10W |
| R304 | 1-216-077-00 | RES-CHIP | 15K | 5% | 1/10W |
| R305 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R306 | 1-216-105-00 | RES-CHIP | 220K | 5% | 1/10W |
| R331 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R332 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W |
| R333 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R334 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R351 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R352 | 1-249-383-11 | CARBON | 1.5 | 5% | 1/6W F |
| R353 | 1-216-065-00 | RES-CHIP | 4.7K | 5% | 1/10W |
| R354 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R500 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W (4954X) |
| R501 | 1-216-105-00 | RES-CHIP | 220K | 5% | 1/10W |
| R502 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R503 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R507 | 1-216-065-00 | RES-CHIP | 4.7K | 5% | 1/10W |
| R508 | 1-216-065-00 | RES-CHIP | 4.7K | 5% | 1/10W |

**MAIN** **KEY**

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R509 | 1-216-065-00 | RES-CHIP | 4.7K | 5% | 1/10W |
| R510 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R511 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R512 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R513 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R514 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R517 | 1-216-105-00 | RES-CHIP | 220K | 5% | 1/10W |
| R518 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R519 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R520 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R521 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R523 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R526 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R527 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R528 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R529 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R530 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R531 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W (4950X) |
| R532 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R535 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R536 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R537 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R538 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R539 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R540 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R541 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R542 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R543 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R544 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R545 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R546 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R547 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R548 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R551 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R552 | 1-216-105-00 | RES-CHIP | 220K | 5% | 1/10W |
| R553 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R554 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R555 | 1-208-806-11 | RES-CHIP | 10K | 0.5% | 1/10W |
| R556 | 1-208-806-11 | RES-CHIP | 10K | 0.5% | 1/10W |
| R557 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R558 | 1-216-033-00 | METAL CHIP | 220 | 5% | 1/10W |
| R560 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W (4950X) |
| R561 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R562 | 1-208-806-11 | RES-CHIP | 10K | 0.5% | 1/10W |
| R563 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R564 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R568 | 1-216-295-00 | SHORT | 0 | | |
| R570 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R571 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W |
| R572 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W |
| R573 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W F |
| R574 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R576 | 1-216-105-00 | RES-CHIP | 220K | 5% | 1/10W |
| R581 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R586 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |

| Ref. No. | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| R587 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R588 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R589 | 1-216-085-00 | METAL CHIP | 33K | 5% | 1/10W |
| R590 | 1-216-097-00 | RES-CHIP | 100K | 5% | 1/10W |
| R591 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W |
| R592 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W |
| R593 | 1-216-089-00 | RES-CHIP | 47K | 5% | 1/10W |
| R594 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R601 | 1-249-387-11 | CARBON | 3.3 | 5% | 1/4W F |
| R603 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R604 | 1-216-041-00 | METAL CHIP | 470 | 5% | 1/10W |
| R621 | 1-216-065-00 | RES-CHIP | 4.7K | 5% | 1/10W |
| R622 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R631 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R632 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W F |
| R702 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R703 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R704 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R705 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R706 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R707 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R708 | 1-216-025-00 | RES-CHIP | 100 | 5% | 1/10W |
| R710 | 1-216-001-00 | METAL CHIP | 10 | 5% | 1/10W |
| R751 | 1-216-049-00 | RES-CHIP | 1K | 5% | 1/10W |
| R753 | 1-216-073-00 | METAL CHIP | 10K | 5% | 1/10W |
| R781 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| R782 | 1-216-081-00 | METAL CHIP | 22K | 5% | 1/10W |
| | | < SWITCH > | | | |
| S501 | 1-571-478-11 | SWITCH, SLIDE (FREQUENCY SELECT) | | | (4950X) |
| S551 | 1-692-431-21 | SWITCH, TACTILE (RESET) | | | |
| S552 | 1-771-540-11 | SWITCH, PUSH (1 KEY)(NOSE SWITCH) | | | |
| | | < TUNER > | | | |
| TU1 | A-3220-738-A | TUNER UNIT (TUX-020) | | | |
| | | < VIBRATOR > | | | |
| X501 | 1-781-294-21 | VIBRATOR, CRYSTAL (18, 432MHz) | | | |
| X502 | 1-567-098-41 | VIBRATOR, CRYSTAL (32,768MHz) | | | |
| ********** | | | | | |
| | | KEY BOARD | | | |
| | | ******** | | | |
| | 1-694-660-11 | CONDUCTIVE BOARD, CONNECTION | | | |
| | | ********** | | | |
| * | 3-040-992-01 | HOLDER (LCD) | | | |
| * | 3-040-993-01 | PLATE (LCD), LIGHT GUIDE | | | |
| * | 3-040-997-01 | PLATE (LCD), GROUND | | | |
| * | 3-041-371-02 | SHEET (REFLECTOR) | | | |
| | | < CAPACITOR > | | | |
| C952 | 1-163-037-11 | CERAMIC CHIP | 0.022uF | 10% 25V | |
| C953 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5.00% 50V | |
| C954 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | |
| C955 | 1-164-004-11 | CERAMIC CHIP | 0.1uF | 10% 25V | |
| C956 | 1-164-489-11 | CERAMIC CHIP | 0.22UF | 10.00% 16V | |

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | < CONNECTOR > | |
| CN901 | 1-794-065-21 | PLUG, CONNECTOR 14P | |
| | | < DIODE > | |
| D901 | 8-719-158-49 | DIODE UDZ-TE-17-12B | |
| D902 | 8-719-056-82 | DIODE UDZ-TE-17-6.2B | |
| D903 | 8-719-056-82 | DIODE UDZ-TE-17-6.2B | |
| D904 | 8-719-056-82 | DIODE UDZ-TE-17-6.2B | |
| D952 | 8-719-976-99 | DIODE UDZ-TE-17-5.1B | |
| | | < IC > | |
| IC901 | 8-759-366-34 | IC LC75824E | |
| | | < LIQUID CRYSTAL DISPLAY > | |
| LCD901 | 1-803-907-41 | DISPLAY PANEL, LIQUID CRYSTAL | |
| | | < DIODE > | |
| LED901 | 8-719-061-16 | DIODE CL-190SR-CD-T | |
| LED902 | 8-719-061-16 | DIODE CL-190SR-CD-T | |
| LED903 | 8-719-061-16 | DIODE CL-190SR-CD-T | |
| LED904 | 8-719-061-16 | DIODE CL-190SR-CD-T | |
| LED910 | 8-719-078-19 | DIODE LWA673-R1S2*1 | |
| LED911 | 8-719-078-19 | DIODE LWA673-R1S2*1 | |
| LED912 | 8-719-078-19 | DIODE LWA673-R1S2*1 | |
| LED913 | 8-719-078-19 | DIODE LWA673-R1S2*1 | |
| LED914 | 8-719-078-19 | DIODE LWA673-R1S2*1 | |
| LED915 | 8-719-078-19 | DIODE LWA673-R1S2*1 | |
| | | < SWITCH > | |
| LSW901 | 1-771-883-21 | SWITCH, TACTILE (WITH LED)(OFF) | |
| LSW902 | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED)(SOURCE) | |
| LSW903 | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED)(SOUND) | |
| LSW904 | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED)(MENU) | |
| LSW906 | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED)(MODE ◄II►) | |
| LSW907 | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED)(ENTER) | |
| LSW909 | 1-762-737-11 | SWITCH, KEY BOARD (LED)(D-BASS) | |
| LSW912 | 1-771-883-21 | SWITCH, TACTILE (WITH LED)(6) | |
| LSW913 | 1-771-883-21 | SWITCH, TACTILE (WITH LED)(5) | |
| LSW914 | 1-771-883-21 | SWITCH, TACTILE (WITH LED)(4) | |
| LSW915 | 1-771-883-21 | SWITCH, TACTILE (WITH LED)(3) | |
| LSW916 | 1-771-883-21 | SWITCH, TACTILE (WITH LED)(SHUF 2) | |
| LSW917 | 1-771-883-21 | SWITCH, TACTILE (WITH LED)(REP 1) | |
| | | < RESISTOR > | |
| R901 | 1-216-647-11 | METAL CHIP 680 0.5% 1/10W | |
| R902 | 1-216-647-11 | METAL CHIP 680 0.5% 1/10W | |
| R903 | 1-216-647-11 | METAL CHIP 680 0.5% 1/10W | |
| R904 | 1-216-651-11 | METAL CHIP 1K 0.5% 1/10W | |
| R905 | 1-216-655-11 | METAL CHIP 1.5K 0.5% 1/10W | |
| R906 | 1-216-655-11 | METAL CHIP 1.5K 0.5% 1/10W | |
| R907 | 1-216-659-11 | METAL CHIP 2.2K 0.5% 1/10W | |
| R908 | 1-216-663-11 | METAL CHIP 3.3K 0.5% 1/10W | |
| R909 | 1-216-667-11 | METAL CHIP 4.7K 0.5% 1/10W | |
| R910 | 1-216-671-11 | METAL CHIP 6.8K 0.5% 1/10W | |
| R911 | 1-208-806-11 | RES-CHIP 10K 2% 1/10W | |
| R912 | 1-216-647-11 | METAL CHIP 680 0.5% 1/10W | |
| R913 | 1-216-647-11 | METAL CHIP 680 0.5% 1/10W | |
| R914 | 1-216-647-11 | METAL CHIP 680 0.5% 1/10W | |
| R915 | 1-216-651-11 | METAL CHIP 1K 0.5% 1/10W | |
| R916 | 1-216-655-11 | METAL CHIP 1.5K 0.5% 1/10W | |
| R917 | 1-216-655-11 | METAL CHIP 1.5K 0.5% 1/10W | |
| R918 | 1-216-659-11 | METAL CHIP 2.2K 0.5% 1/10W | |
| R919 | 1-216-663-11 | METAL CHIP 3.3K 0.5% 1/10W | |
| R920 | 1-216-667-11 | METAL CHIP 4.7K 0.5% 1/10W | |
| R921 | 1-216-810-11 | METAL CHIP 120 5% 1/16W | |
| R923 | 1-216-812-11 | METAL CHIP 180 5% 1/16W | |
| R925 | 1-216-031-00 | METAL CHIP 180 5% 1/10W | |
| R927 | 1-216-037-00 | METAL CHIP 330 5% 1/10W | |
| R929 | 1-216-033-00 | METAL CHIP 220 5% 1/10W | |
| R930 | 1-216-812-11 | METAL CHIP 180 5% 1/16W | |
| R931 | 1-216-813-11 | METAL CHIP 220 5% 1/16W | |
| R932 | 1-216-813-11 | METAL CHIP 220 5% 1/16W | |
| R933 | 1-216-813-11 | METAL CHIP 220 5% 1/16W | |
| R935 | 1-216-812-11 | METAL CHIP 180 5% 1/16W | |
| R938 | 1-216-809-11 | METAL CHIP 100 5% 1/16W | |
| R939 | 1-216-821-11 | METAL CHIP 1K 5% 1/16W | |
| R953 | 1-216-857-11 | METAL CHIP 1M 5% 1/16W | |
| R954 | 1-216-049-00 | RES-CHIP 1K 5% 1/10W | |
| R955 | 1-216-049-00 | RES-CHIP 1K 5% 1/10W | |
| R956 | 1-216-821-11 | METAL CHIP 1K 5% 1/16W | |
| R957 | 1-216-851-11 | METAL CHIP 330K 5% 1/16W | |
| R958 | 1-216-033-00 | METAL CHIP 220 5% 1/10W | |
| R970 | 1-216-815-11 | METAL CHIP 330 5% 1/16W | |
| R971 | 1-216-815-11 | METAL CHIP 330 5% 1/16W | |
| R972 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R973 | 1-216-815-11 | METAL CHIP 330 5% 1/16W | |
| R975 | 1-216-815-11 | METAL CHIP 330 5% 1/16W | |
| R976 | 1-216-815-11 | METAL CHIP 330 5% 1/16W | |
| R977 | 1-216-815-11 | METAL CHIP 330 5% 1/16W | |
| R981 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| R999 | 1-216-864-11 | METAL CHIP 0 5% 1/16W | |
| | | < ROTARY ENCODER > | |
| RE901 | 1-475-014-11 | ENCODER, ROTARY (JOG) | |
| | | < SWITCH > | |
| S901 | 1-771-884-21 | SWITCH, TACTILE (WITH LED)(– I◄◄ ◄◄) | |
| S902 | 1-771-884-21 | SWITCH, TACTILE (WITH LED)(DISC+ PRST+) | |
| S903 | 1-771-884-21 | SWITCH, TACTILE (WITH LED)(+ ►►I ►►) | |
| S904 | 1-771-884-21 | SWITCH, TACTILE (WITH LED)(PRST– DISC–) | |

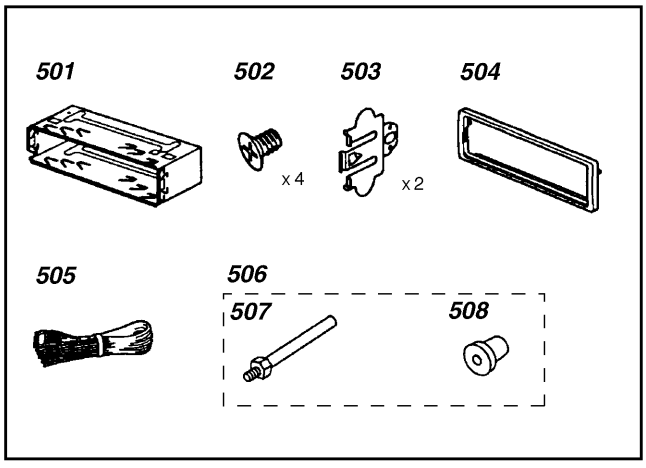
**********

MISCELLANEOUS
**********

| | | |
|---|---|---|
| 17 | 1-792-194-21 | CORD (WITH CONNECTOR)(POWER) |
| 63 | 1-694-660-11 | CONDUCTIVE BOARD, CONNECTION |
| F781 | 1-532-877-11 | FUSE (BLADE TIPE)(AUTO FUSE) |
| HP901 | 1-500-157-21 | HEAD, MAGNETIC (PLAY BACK) |
| LCD901 | 1-803-907-41 | DISPLAY PANEL, LIQUID CRYSTAL |
| M901 | A-329-665-A | MOTOR ASSY, MAIN (CAPSTAN/REEL) |

**********

| Ref. No. | Part No. | Description | Remark |
|---|---|---|---|
| | | ********** | |
| | | HARDWARE LIST | |
| | | ********** | |
| #1 | 7-621-772-20 | SCREW +B2X5 | |
| #2 | 7-685-792-09 | SCREW +PTT 2.6X6 (S) | |
| #3 | 7-685-793-01 | SCREW +PTT 2.6X8 (S) | |
| #4 | 7-685-647-11 | SCREW +BVTP 3X10 TYPE2 N-S | |
| #5 | 7-685-791-01 | SCREW +PTT 2.6X5 (S) | |
| #6 | 7-685-106-19 | SCREW +P 2X10 TYPE 2NON-SLIT | |
| #7 | 7-624-104-04 | STOP RING 2.0, TYPE -E | |
| #8 | 7-627-553-17 | PRECISION SCREW +P 2X2 TYPE 3 | |
| #9 | 7-685-791-01 | SCREW +PTT 2.6X5 (S) | |
| #10 | 7-685-795-01 | SCREW +PTT 2.6X12 (S) | |
| ********** | | | |
| | | ACCESSORIES & PACKING MATERIALS | |
| | | ********** | |
| | 3-044-361-31 | MANUAL, INSTRUCTION (ENGLISH, SPANISH, CHINESE)(4950X) | |
| | 3-044-362-21 | MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, CHINESE)(4950X) | |
| | 3-044-363-11 | MANUAL, INSTRUCTION (ENGLISH, CHINESE, ARABIC)(4954X) | |
| | 3-044-364-11 | MANUAL, INSTRUCTION, INSTALL (ENGLISH, CHINESE, ARABIC)(4954X) | |
| | X-3378-490-1 | CASE (PANEL) ASSY | |
| ********** | | | |
| | | PARTS FOR INSTALLATION AND CONNECTIONS | |
| | | ********** | |
| 501 | X-3373-602-1 | FRAME ASSY | |
| 502 | 3-934-325-01 | SCREW, +K (5X8) TAPPING | |
| 503 | 3-233-644-01 | SPRING, FITTING | |
| 504 | 3-040-979-01 | COLLAR | |
| 505 | 1-792-194-21 | CORD (WITH CONNECTOR)(POWER) | |
| 506 | X-3366-405-1 | SCREW ASSY (EXP), FITTING | |
| 507 | 3-386-828-01 | SCREW, FITTING | |
| 508 | 3-349-410-01 | BUSHING | |



*MEMO*

## REVISION HISTORY

Clicking the version allows you to jump to the revised page.
Also, clicking the version at the upper right on the revised page allows you to jump to the next revised page.

| Ver. | Date | Description of Revision |
|---|---|---|
| 1.1 | 2001.05 | Change of Part No. for SPRING, FITTING (ECN-CSA04727) |
| 1.0 | 2000.06<br>2000.02 | Correction-1<br>New |
| | | |
| | | |
| | |